
The Purchasing Process at Yard Selling Department

Case: Company X



Bachelor's thesis

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ABSTRACT

The study was commissioned by Company X, building and home improvement retail store. There have been misunderstandings in the company about how the products should be purchased. The store has just gone through organizational change due to fact that the shopkeeper has changed and new line is to push effort on the purchasing process.

The aim of this study is to search the current level of purchasing process and then give suggestions how the process could be developed. The theory is based on the literature that supports retail stores purchasing process. Empirical study was then made based to theoretical knowledge to persons who are responsible for purchasing. Study was then analyzed and conclusions made.

The conclusion is based both on the theoretical part of the study as well as the empirical study. Based on the empirical study, there is clear need of education to persons who are responsible for purchasing goods. The response rate for the study was full 100% so the results were valid. Also field research showed that there is too much equity bind on the stock and lowering the level could improve the return on investment.

In the suggestion part it was decided to execute it as a guidebook to help persons responsible to make easier and better decision concerning purchasing process. In the guidebook, the purchasing process was decided to implement as a case study concerning one of the commissioning company's supplier.

Keywords purchasing, purchasing process

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TIIVISTELMÄ

Tämä opinnäytetyö on Yhtiö X rautakaupalle tehty tutkimus. Yhtiössä ei ole ollut yhtenäistä hankintaprosessia aikaisemmin ja hankinta on suoritettu, kuten muilta on opittu. Yhtiö on juuri käynyt läpi suuren organisaatiomuutoksen, missä tapahtui kauppiasvaihdos. Uusi linja kaupassa on sijoittaa hankintaan ja sen toteuttamiseen.

Tämän työn oli tarkoitus tutkia nykyistä hankintaprosessia ja saatujen tulosten pohjalta tehdä ehdotuksia kuinka sitä voisi parantaa.

Teoria perustuu kirjallisuuteen, joka käsittelee rautakaupan alan hankintaprosessia. Empiirinen tutkimus tehtiin niille työntekijöille, jotka olivat vastuussa hankinnoista. Sen jälkeen tutkimuksen tulokset analysoitiin ja niistä vedettiin johtopäätöksiä.

Kyselyn tuloksien mukaan yhtiössä on selvä tarve hankintaprosessikoulukseen. Vastausprosentti oli 100%, joten kyselyn tuloksia voidaan pitää luotettavina. Kenttätutkimuksessa paljastui myös, että rahaa on sidottu liikaa hyllyssä oleviin tuotteisiin. Pudottamalla tätä pääomaa voisi yhtiön kannattavuus nousta.

Parannusehdotelmasta päätettiin tehdä opaskirja henkilöille jotka ovat vastuussa tuotteiden hankinnasta. Opaskirjassa hankintaprosessi on toteutettu esimerkin kautta. Siinä yhdelle tavarantoimittajista on tehty analyysi, jonka perusteella voisi hankintaa suunnitella. Opaskirjan tarkoitus on tarjota esimerkkejä, joiden pohjalta hankintaprosessia saatettaisiin kehittää ja parantaa.

Avainsanat hankinta, hankinta prosessi

Sivut 42 s. + liitteet 16 s.

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1 INTRODUCTION

1.1 Importance of purchasing in the field of retail stores

Profit is not made by selling but purchasing states Aki Hynninen who is the CEO of the most successful company in Finland 2008. The main thing why new businesses are established around the world every day is difference between revenues and expenses that is called profit. When company makes profit, it means that its revenues are larger than expenses. (Rauhala 2011, 118.)

There are two ways to increase the profit rate of the company, increasing revenues or cutting costs. Expenses can be cut in the certain point but not continuously. Then it is time to find out ways to increase profitability. According to the demand curve, the price cannot be increased over the certain point without losing amount of sales. In the long run, the demand will meet with supply and set the equilibrium price. Equilibrium price is the price that maximum number of customer is willing to pay and supplier can charge without losing amount of sales. It is also called as a market price. Competitors will make any business to follow the market price in retail stores in the long run, so the possible increase on profit has to come from somewhere else. (Evert & Griffin, 2007, 14-15.)

Customer oriented approach is the word in retail business and it should be never forgotten that the customers are the ones that bring the money to company. In retail business, it is essential that things are taken care of without delay and goods and services satisfy customer needs. The purchasing process is a series of actions that should be fit together as simply as possible to reduce the deficiency of customer service. The purchasing process done right increases flexibility and add competitiveness. Nowadays the trend is that companies have wide products range and all customer needs are tried to satisfy. Companies have many different suppliers and the order batches are small and supplied in many different batches. (Sakki, 1999, 11-19.)

The importance of purchasing process cannot be underestimated. Costs that the goods lying on the store can be even more than a half the costs goods sold. Purchasing process gone wrong might be very expensive to company and this fact goes vice versa. Stores can see all the benefit on the profits when the purchasing process is done correctly and efficiency. This is the benefit customers cannot see, and company receives. Companies just have to handle the benefits in the right ways. (Van Weele, 2010, XV.)

The reason for this study is that lowering the owner's equity in the stock could improve the operating income percentage. The operating income percentage is one of the basic key figures that measure company's success. The guide rating for the operating income percentage is as follows:

- Over 10% is good
- 5%-10% is satisfying
- Less than 5% is weak

One way to improve this key figure is to decrease the owner's equity in the stock assuming that it does not affect negatively to the sales. Second statistic that proves there is something wrong with the purchasing process is the total turnover number of all products in the company. On the year 2011 the turnover number for all products was 3,13. This means that the purchased products lay down on the shelves too long before being sold. The usual payment time for purchased products are 21 days and turnover number indicates that most of the products does not leave the company before the bill has to be paid. (Tunnusluvut)

1.2 Company X

Commissioning company works in the field of retailing building and home improvement products. There are about 30 employees in the company X. In the year 2011, the turnover of company X was about 7 million and it decreased few percentages from the previous year. The company just went through big organizational change and new line is to decrease the owners' equity in the stock. Company X belongs in the chain that is one of the biggest in the field of retailing building and home improvement products in the Nordic countries. Company X offers beside products, also services to its customers. Customer can purchase installation service, designing service, financing service or delivery service with the products offered. The new thing is "personal salesman" service. It means that the same salesman service the customer from the start of the project to the end satisfying all the customer needs. Usually this kind of service is offered when customer have challenging project that takes more than few visit to the store.

1.3 Building and HVAC department

When consumers or professionals build something and needs building materials, they contact Building and HVAC department. This department offers professional guidance and solutions to customers in the every stage of the building process. The building and HVAC have two different service desks, one is mainly for normal consumers and the other is for professional customer. The main service desk deals with normal consumers and their needs by offering them solutions in all troubles and the second desk, meant to professionals handles special needs of different kind of building and renovating companies. Both desks sell many products located in the yard-selling department and then guide the customers to pick up the products. Customer can also buy delivery by a truck or van if the products are larger. In the organizational chart, the yard-selling department is located under the Building and HVAC but in the practise it is own department.

1.3.1 Yard selling department

The yard selling department is located outside the main store in immediate closeness. The department offers all bigger products from every department inside the store. It also works as a buffer stock to some products that do not fit inside. The main emphasis is on the bigger home building product groups such as:

- Foundations and façade
- Insulating material
- Building frame materials and accessories
- Covering materials and accessories
- Lumber
- HVAC

The products are located in the YSD according to the logical needs of the building process from foundation to covering. Employees will help customers to collect all products and load them in to the vehicle. Customers can either buy products from inside the store and just pick up the products from YSD or come straight to YSD and make the deal there. Once a customer is ready with products, the cashiers will then collect the money and the customer is free to go.

The staff of YSD and building and HVAC purchases all the products located in YSD manually. This means that they keep an eye on the amount of the products and purchase more when the amount seems low. There has been no guidance on the quality or any other things concerning the purchasing process of the YSD.

1.4 Purpose and objectives

The purpose of this study is to find out how to improve the purchasing process in Company X YSD department. This is a very interesting field at the moment due to the fact that new shopkeepers emphasize the importance of purchasing and the previous shopkeeper did not concentrate much on the process. According to the author's own observations, there has been no education for employees about the purchasing process before. Many products have got out dated or just broken because the purchased batches have been over estimated or products not sold in many years. New shopkeepers are now planning to cut the product selection and push more effort only to products that are sold well. Almost all special products are planned to be cut out from the selection. This study is only going to concentrate on the purchasing process of current products and current suppliers whose products are located and sold from YSD.

1.5 Research methods

At first, this study concentrates on the theoretical knowledge of purchasing process. The sources for theoretical knowledge are gathered from books, e-books, articles and concept guides. Also, WEB sources are used such as concepts and stores own web pages. The theoretical information is then applied to create empirical study. This study was implemented to all persons in Company X who are responsible for purchasing products located in the YSD. The study itself was implemented online using Webropol survey and analysis program. The results of empirical study are then analyzed and recommendations made combining the information from the theoretical part and empirical part.

The author has worked for the company three years and is now responsible for YSD and its functions. The authors own observations are used to add unwritten information and support the recommendations.

2 PURCHASING PROCESS THEORY

Sales budget is the mother of all budgets. In wholesale business as any other profit making business, first company have to investigate the possible markets before making any investments. After the investigation, the company can plan their other budgets. It is important to have budgets to be able to develop and follow the performance of the company. Once the buying budget is planned, the purchasing process can start. (Rauhala 2011, 112.)

This chapter will introduce the purchasing process and its key formulas. The purchasing process is discussed on the schematically order. The theory part is meant to support the field of building and home improvement business and is later on used to form empirical study and the recommendations to improve the purchasing process.

2.1 Purchasing process

Van Weele describes the purchasing process as an eight-step process. These eight steps are the main activities in the process and are schematically illustrated in the figure one.

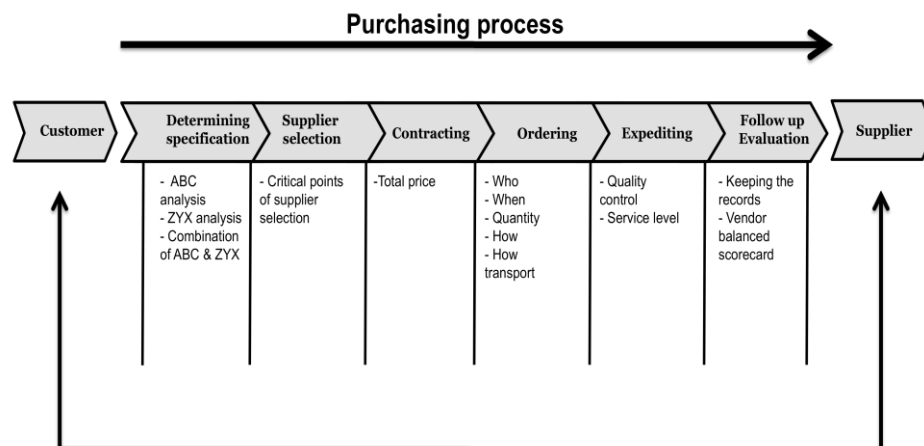


Figure 1 Purchasing process (Van Weele 2010, 9.)

In the first step, a company recognizes the need. This need usually comes from the customers and the company wants to satisfy it. The need can come also inside the company, for example the company need to maintenance its equipments and needs tools for it. Wherever the need comes, it is the first thing that launches the purchasing process.

Determining specifications is very important stage. The company identifies the true need and find out the specifications of the goods need to be acquired. In the field of retail storing the best quality is not always the right one. When the need comes from the end user, the company have to find out what is the best solution for its customers and company itself. It also applies to products that are ordered straight to end-users. (Chunawalla 2008, 14.)

Ones the specifications are determined, selecting supplier starts. The specifications usually limit the possible suppliers and then the company have to make the decision between the rests. This selecting supplier should be done also to current suppliers to investigate the benefit the company gets from them. The main goal of this stage is to find out which suppliers are the most important to buyer. The company can use much different kind of techniques to decide the right supplier and some of these are introduced later on the chapter 2.3. (Rauhala 2011, 26.)

Contracting should take into consideration all things concerning the relationship between supplier and customer. Legal policies, monetary policies, environmental requirements and other important things are stated and agreed in this stage. (Chunawalla 2008, 137.)

In the ordering stage, the products are purchased. This can be one-time activity or a process to develop the best practices for the future. In this stage retail stores push much effort on the quantities to maximize the profit. This stage can also include the decision-making about the transportation style. Here the customer also starts to evaluate and rate the supplier. (Van Weele, 2010, 9.)

Last two stages go hand in hand in the process. Expediting, and follow up and evaluation are all processes where customer measures supplier's competencies. In the expedition stage the main emphasis is to make sure that the right goods a5re supplied in time. The follow up and evaluation stage is for the supplier record. By these records, the company can evaluate and rank its suppliers. Also giving feedback to supplier is very important to improve their processes. (Van Weele, 2010, 9.)

2.2 Determining specifications

There are several ways to find out the best possible products that customers' need, but none of these techniques alone is very reliable. In building and home improvement retail business there are as many needs as are customers. Every company have to find out which products satisfy as many customer needs as possible. Mathematical tools combined to customer surveys and knowledge of the field help companies to make the decision about the product range.

2.2.1 ABC analysis

One of the most common ways to analyze the stock is to make ABC analysis. The analysis is origin from Pareto and is based on the statistics. This Italian economist found out that small percentage of population has the biggest effect on the society. This rule is also called as 80/20 rule, which means that 20 percent of products brings 80 percent of sales. This rule was then breed to ABC analysis. Many times companies add fourth class in the ABC analysis. This D class represents only the rest of the products that are not sold at all in the year. D class can also represent the rest 2 % of the products and then the division of classes goes as follows: A 50%, B 30%, C 18% and D 2%. The D class is also called as non-sold products. Many companies prefer this 4-class ABC analysis because it gives more valuable information. ABC analysis can be used with every classification number of the company but when it is used to find out the most important products, one should create the ABC analysis based on years sales by purchasing prices VAT 0%. ABC analysis then puts these products from certain product group to descending order. One can then see how much these products are sold based on the monetary value in one year. The period to calculate these results should be one year so that seasonal sale changes could not affect a lot to results. (Viale 1996, 82.) (Rauhala 2011, 151-152.).

ABC analysis gives valuable information but it does not take in consideration the amount of sales. There might be some products at the top of ABC analysis that are only sold one in a year but it has been very expensive. To support the results of ABC analysis companies many times make XYZ analysis to find out the amount of sales of certain products. (Rauhala 2011, 151-152.)

2.2.2 XYZ analysis

This analyse is done in the same way as ABC analyze but the calculated things are transactions occurred for certain products. The main goal of this analysis is to find out the occurred transactions as precise as possible. This analysis is meant to support other analyzes such as ABC to get more valuable information about products. Products ranked on the last classes of ABC analysis may be on the top of the XYZ analysis. XYZ analyzes formula goes as follows:

$$X = Y \times Z$$

X= Transaction volume

Y= Transaction per certain product

Z= Transaction per certain product line

2.2.3 Combination of ABC and XYZ analysis

When both analyses are done it is time to combine the results. Very easy way to do this is to make matrix. As one can see from the table one; combining these two analyses gives valuable information about classified products. Products in different classes need different kind of attention. For example, if the product belong to A class in ABC analysis and Z class in ZYX analyses, company should really think whether to keep this in stock or just keep it as a ordering product. This product could be for example expensive geothermal heating unit that has been sold with high price.

Table 1 Combination of ABC and ZYX analyses with the need of stocking and special attention

	C	B	A
X	Usually stocking except special products	Usually stocking, needs special supervision	Must be in the stock, Needs special supervision
Y	Usually stocking except special products	Stocking only for critical products, other ways based on the costs	Must be in the stock, Needs special supervision
Z	Stocking only for critical products, other ways based on the costs	Stocking only for critical products, other ways based on the costs	Mainly order products. Stocking only for critical products

When this same matrix is presented other ways in the figure two, one can clearly see how products can be categorized according available information. The best possible products are the ones that belong to A class and also in X class. The future of the products that belong in C class and also in Z class should be considered. These products may have been lying on the shelves already a year and may have out dated.

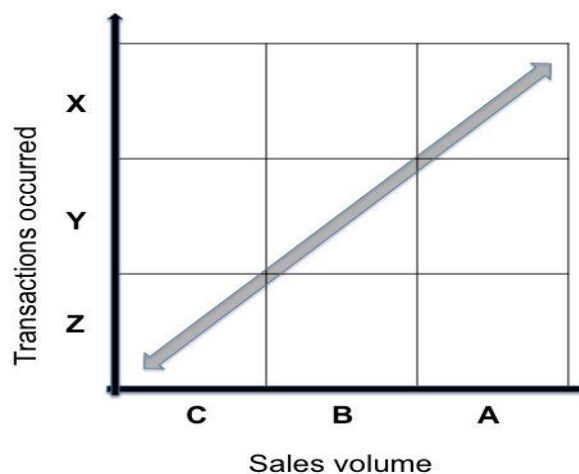


Figure 2 The matrix of ABC and ZYX analysis (Sakki 1999, 106.)

2.3 Supplier selection

Analyzing current suppliers is critical to develop the store. ABC analyze can also be done to suppliers. Here one can easily see how many transactions occur per supplier. There might be important suppliers who are not treated well enough or even some that are really important to company. But in this case, the decision is not that simple. The store has possibility to choose from which storage of the certain supplier is used for the supply. Closest storage may not be the cheapest one and may take as much time to supply as the one that is located in the other side of Finland. This means that in the supplier selection, there are always hidden costs that every person needs to know to get supplier selection done efficiently. These expenses are visualized in the figure three. (Hokkanen, Karhunen & Luukkainen 2010, 189.)



Figure 3 Iceberg model of the cost structure of inventory. (Hokkanen & Virtanen 2012, 78.) (Daily dreams design, 2010.)

As one can see, it is not only the purchasing and transportation costs that need to be noticed. Besides monetary issues, there are many other things that need consideration. Flexibility and expertise are as valuable characteristics as monetary characteristics. One still have to remember when making supplier selection that the supplier will also make an analysis about its customers so this evaluation goes in both ways. Every customer service personnel have faced this annoying customer who thinks that everything is wrong and service is bad. They have still got the service but the quality may not have been the best possible. A customer service personnel is still human who does not have to take everything without biting. The result may be seen in the quality of service or even directly in prices. It is not enough to cooperate with the suppliers but to create relationship. (Rauhala 2011, 214.)

It is very important to act according peer pressure given by customer. This means that even though some supplier have lower prices on very similar products as other, might be better to keep the more expensive. For example in plasters, company X have very same kind of products as company Y but they are sold in better profit. Professional customers who use these products still choose Y over X due to fact that X had problems with some products in the 90s and they handled the customer feedback

poorly. So the more expensive is also more popular even though technically they are very close each other. This same thing can easily be noticed from the ABC and ZYX analyzes.

2.4 Contracting

Contract can whether be long-range purchasing agreement or just one time agreement. If the supplier is used more than one time, the company should make long-term contracts to avoid the price competition every order time. It might also be beneficial to make long-term agreements so that people who are responsible for order can develop a habit how to make orders and does not have to adapt new ways many times. In Company X the shopkeeper makes the contract with the suppliers due to responsible questions. Person who is responsible from purchasing should be involved already in contracting stage to start to develop the supplier relationship. Being involved in this stage can make ordering and contacting suppliers much more easier. (Hokkanen et al. 2010, 188.)

2.4.1 Price

As one can see from the figure 3, there are hidden costs that the buyer cannot see instantly. The cheapest is not always the most economical states Aki Hynninen. When comparing the suppliers only by price, all costs should be taken into consideration. These hidden costs may affect largely to total costs of certain products. Even though the prices are many times agreed in the contracts already, there is always possibility to bargain from the decided prices. (Rauhala 2011, 118.)

2.5 Ordering

The next step of purchasing process is actual ordering. Ordering is not just a phone call to suppliers but needs closer look. Doing ordering right might save the company a lot of money. First thing to decide is who is responsible for ordering.

2.5.1 Who

Deciding who gets the responsible of purchasing should not be underestimated. The purchasing person must have certain traits and skills to be successful in purchasing position. When choosing the right person for purchasing, a company can save a lot of money and keep their customers happy. The traits and skills for the successful purchasing personnel are:

- Good knowledge about their functions, role and responsibilities
- Initiative and creative to find more efficiency in their work habits
- Ability to make decisions and take calculated risks
- Planning skills to be able to get cost reductions
- Controlling ability to create statistics and habits based on those

- Well mannered to avoid conflicts between suppliers
 - Willingness to learn more
 - Modern knowledge about the prices and products
- (Chunawalla 2008, 265-266.)

2.5.2 When

When Retail Company pursue efficient inventory management, it has to determine the buffer stock for the products. Buffer is the stock that protects the company from fluctuations of demand. This is the minimum amount of products that has to be present to satisfy possible customer needs. Buffer stock can be determined by calculating the standard deviation of the forecast error. This way a company can find out the required safety stock when the demand changes from the forecasts. The worst thing that can happen is that a company have to sell “do not have” products. To calculate the standard deviation of forecasted sales, a company needs to have some basic information about a product. One can see from the table two how the standard deviation of demand can be calculated.

Table 2 Example from standard deviation calculation. (Viale 1996, 33.)

	1	2	3	4
Time Periods*	Actual Sales	Forecast	Forecast Error	Forecast Error ² (squared)
1	1520	1510	+10	100
2	1490	1500	-10	100
3	1510	1500	+10	100
4	1520	1500	+20	400
5	1470	1510	-40	1600
6	1510	1500	+10	100
			Total	2400

*Time period could be months or years.

- The information in the sections 1 and 2 comes from the statistics. Third column is calculated by subtracting the number in column 2 by the number in column 3.
- In the column 4, the forecast error is squared and in the lowest cell, all the squared forecast errors are added together.
- Last phase is to calculate the average of the square of deviation and then find out the square root of that result.

In the table 1, the rest of the calculations goes: $\sqrt{(2400/6)} = 20$. The result of 20 means that 20 products should be in the buffer stock to avoid the shortage. Company should determine buffer stock at least for each class of ABC analysis meaning that A class should have bigger buffer stock than D class. If possible, every goods should have their own buffer stock limit. Ones the buffer stock is determined, orders should be timed so that the buffer stock remains unusable. (Viale 1996, 33.)

There are different tools to calculate the reorder point. 8 inventory management.

Ordering point is a forecast demand true the lead-time added with the amount of buffer stock. (Viale 1996, 17.) Same formula is illustrated in the figure four.

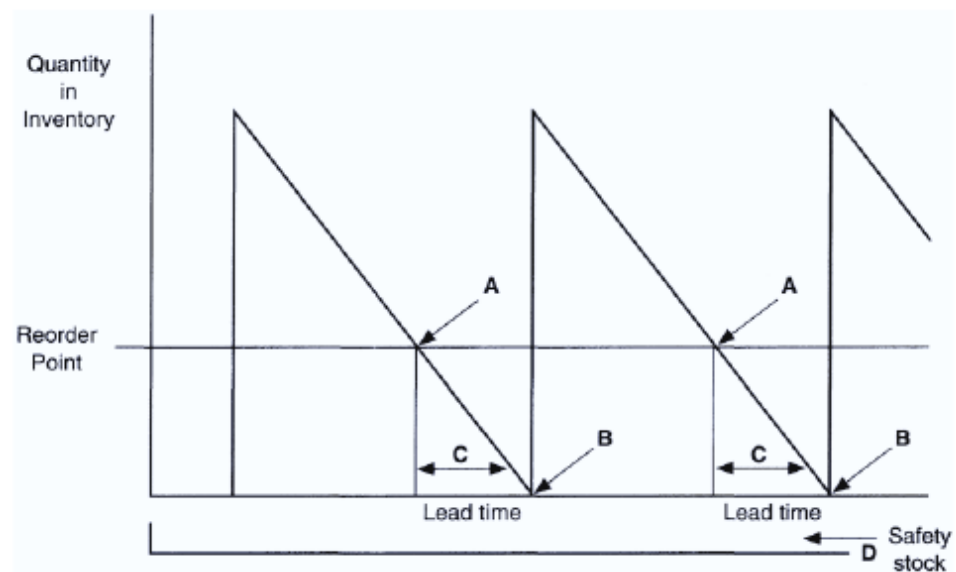


Figure 4 Ordering point illustrated in the order cycle. (Viale 1996, 18.)

- A= reorder point
- B= New order arrives
- C= Suppliers lead time
- D= Safety stock as known as buffer stock

Second possibility is to create ordering points in advance and get the ordering rhythm. This means that the products are ordered always in same interval of time. When ordering this way, ABC analyze comes in hand. A class products have the highest value and that is why A class products are ordered in every purchase from that supplier because these are the ones that should newer be over. B class products are ordered in slower rhythm and C class products have very random rhythm. (Rauhala 2011, 157.)

Relex is automatic system that suggests orders using the buffer stock as an ordering point. In this system, staff has to set the limit when the Relex suggests new orders and it have to be proved by the staff to make order go forward. This system is recommended to use when the quantity of sales in certain product is stable.

Seasonal products are pre-ordered via concept and the delivery times for these products are long due to fact that they are transported usually from Far East. The company cannot affect on the supply times or ordering dates of seasonal products. Still the same ordering guides affect on the seasonal products as those normal products.

2.5.3 Quantity

Ordering products in right patches is very important stage in the retail business. This is one point where the company can save a lot of money and on the other hand lose profits. To forecast the right quantity of order batch, company have to first find out few very important figures about their inventory.

Turnover number of the stock of certain product presents how many times the stock trades in one financial year. This turnover number of certain product reveals the true situation of purchasing quantities. What is considered as good turnover number changes in between products and terms of payment but the basic rule is that bigger the turnover number, the better. For example turnover number 6 means that the certain product is sold 6 times in a year meaning that it takes 60 days to sell the products. The formula for this calculation is as follows: (Rauhala 2011, 128.)

$$X = \frac{Y}{Z}$$

X= Turnover number of the stock

Y= Years sales by purchasing prices VAT 0%.

Z= Average value of the stock VAT 0%.

Cost-effectiveness is the second important figure. This figure is easy to calculate and is in correlation with the turnover number of certain product. Very good cost-efficiency number for the products in the field of building and home improvement is 100. The cost-effectiveness is calculated by:

$$X = Y \times Z$$

X= Cost-effectiveness

Y= Turnover number of certain product

Z= Average profit percent of certain product

Once the company is aware of their turnover rate of certain product and have demand forecast, it can use the formula invented by Wilson to find out the most economic order quantity (EOQ). The EOQ is based on the minimization of ordering costs and stocking costs.

$$EOQ = \frac{\sqrt{2 \times C_o \times D}}{C_i \times U}$$

C_o = Ordering costs of the batch

D = Years demand for certain product

U = Unit price of certain product

C_i = Annual stocking costs of certain product

The formula has gained a lot of criticism because it does not take into account possible fluctuation of demand, the change of costs and wanted service level. In addition, it is very demanding to find out the exact stocking costs. Sakki (1999, 107) says that the only number that is true in that formula is multiplier number two because it is already there. Still this formula can give some direction to batch size and is better than nothing. (Hokkanen & Virtanen 2012, 77-78.)

Other option is to correlate the ordering batch to terms of payment to minimize the owner's equity. This means that the ordering batch should be smaller than the demand forecast for the payment time. For example if the payment time for certain product is 30 days. Then the ordered batch should cover only 2/3 or 3/4 of that 30 days demand forecast. By this way the company gets the money from the customers before the supplier wants their money. This way the company's resources are not allocated in that certain product and can be located to somewhere else. The payment time is stated on the supplier contract or the buyer has to find it out before ordering. (Rauhala 2011, 193.)

When purchasing personnel uses turnover number of the certain product and information of payment time efficiently, company can benefit monetarily. Owner's equity that is bound to inventory can be released to some other activities by purchasing the right amount of products. The money bound to inventory is illustrated in the table three.

Table 3 The effect of turnover number to the owner's equity in the stock when the payment time is 30 days net (Rauhala 2011, 132-133.)

Sales by purchasing prices	Turnover number	Average value of the stock	Sales in payment time	%	Owners equity in the stock	%
300 000	1	300 000	25 000	8	275 000	92
300 000	2	150 000	25 000	17	125 000	83
300 000	3	100 000	25 000	25	75 000	50
300 000	4	75 000	25 000	33	50 000	42
300 000	5	60 000	25 000	42	35 000	33
300 000	6	50 000	25 000	50	25 000	25
300 000	10	30 000	25 000	83	5 000	17
300 000	11	27 273	25 000	92	2273	8
300 000	12	25 000	25 000	100	0	0

As one can see from the table three, if the payment time is 30 days net, the turnover number should be at least 12 to avoid using owner's equity to stock. If the turnover number is only 6, the owner's equity is cut to half from in payment time. The figure clearly illustrates that ordering right amount can relies money to other actions. (Rauhala 2011, 132-133.)

Company X has Profix enterprise resource planning system to manage the stores statistics. There is a lot of valuable information that is available. One can see from the Profix the sales of certain product three years ago and sales can be divided in months. There one can get some estimation to sales but that way possible increase in sales or possible sudden increase in demand in the past is very hard to take in consideration. Profix counts turnover number automatically and cost effectiveness can be calculated very easily.

2.5.4 How

There are four possible ways to deliver the order to supplier; e-mail, fax, phone call or through suppliers web program. What ever is the most suitable style, person who is doing order should always ask for confirmation of order to make sure that the order has been noticed and the quantity and the product itself is right. When doing order via suppliers own web program, the person responsible for purchasing still has to call to supplier to get the order confirmation. This is also the stage where the expediting starts and can lower the possibility of shortage or surplus.

Orders in Company X are first done in the company's own ERP system. Then employee can whether move the order to email or just insert the products and amount into suppliers own web program. When using Relex to create automatically order suggestions, employees have to still go through the order to make sure that everything is right.

In heavy building materials, usually products are ordered manually because almost all of those are more or less seasonal products and many times there are peaks on the statistics where company may have had large sale on one or few customers. Also, the stage of delivering the actual order is usually only time to contact the supplier personally so it is recommended to make orders in phone and at the same time possibly develop the supplier relationship.

2.5.5 How transport

Transportation of products might be the highest cost of purchasing process. The size, weight and amount of the products decide whether to use truck or a van. The purchasing person must also be able to decide whether to use supplier's transportation or outsource the transportation to third party. Company X has own van that can be used for picking up products from suppliers. The decision between supplier's own transportation and outsourcing is always not so easy. The price is not always the only factor affecting to decision. Speed, reliability of delivery, used work hours and timing is just important as price and even sometimes goes ahead. So all in all, cost efficiency is here again the main point.

One has to be aware of prices, weights of ordered products and capabilities of certain transportation vehicles. Some basic rules for transportation in Company X are that:

- Van can carry 0,9 tons or 2 euro size pallet
- Truck can carry 12 tons or 12 euro size pallet
- Semi can carry 38 tons or 38 euro size pallet

Costs of transportation vary from the weight, distance and time taken. Person responsible for ordering must know all these and the easiest way is to ask transportation costs while ordering. Many suppliers have the transportation calculator in their web pages that can be used to get to know the costs. Of course then must be decided is the supplier's own transportation fast enough for the situation and can outsourced transportation be even more faster and cheaper.

2.6 Expediting

There are several techniques and combinations of the expediting styles of how the customer can supervise the supplier and ordered batch. Expediting is very important stage to get the right products in right time and it can give valuable information to supplier where they could develop their process. Expediting done efficiently can reduce the possible shortage of products and that way get the profit to company. (Van Weele 2005, 57.)

Person who is responsible for ordering should always ask the ordering confirmation with the prices from the supplier. This should be done at the same time as the actual order has been sent in. The person responsible from ordering can then check from the confirmation that everything is right in the order. If there is something wrong, the person responsible for ordering should contact the supplier right away to clear misunderstandings.

Routine status check means that the customer contacts the supplier some days before the agreed delivery date just to get another confirmation that the delivery is going to be on time. (Van Weele, 2010, 60.)

2.6.1 Quality control and service level of the supplier

When measuring the service level of supplier, company usually measures flexibility, effortless, communication and technical support. Flexibility means in this case the same as lead-time of the order and possible fast deliveries. Lead-time is the time that helps the company get the product from the order to customer. Both these are measured in time. Effortless means that the whole purchasing process is very easy to do and does not consume too many resources. Communication is the possibility to follow the supply and the schedule. This way the customer is always aware of the situation and can plan ahead. Technical support of the supplier means customer service that can give professional help to customer concerning their products and habits. Next is introduced some common ways to measure the service level of supplier. (Sakki, 1999, 175.)

Backorder means that the product cannot be delivered in time. To measure the percentage portion of backorder, company have to divide the amount of backorders by the total amount of orders. The formula in precise form is:

$$X = \frac{Y}{Z}$$

X= Backorders in percentages

Y= Amount of backorders

Z= Total amount of orders

Lost orders means the orders that are not delivered in time because the delivery time did not meet the demand of the customer. This is measured in amounts.

The portion of errors in the orders means all errors whether it means the time, amount or quality. This form is:

$$X = \frac{Y}{Z}$$

X= Portion of errors
Y= Amount of errors
Z= Amount of deliveries

Lead-time in claims is very important to be low because customer does not want to wait and time is money. The form to measure lead-time in claims is:

$$X = \frac{Y}{Z}$$

X= Lead-time in claims
Y= Handling time
Z= Amount of claims

Costs of setting claims is good to know and companies should give this information as a feedback to suppliers every time. The formula to calculate the costs of setting claims is:

$$X = Y \times Z$$

X= Costs of setting claims
Y= Time used of the customer in hours
Z= hourly wage of the customer

2.7 Follow up and evaluation

The purchasing process does not end when the ordered products are delivered. Follow up and evaluation is important stage to improve customer's methods as also supplier's methods. This last stage is mainly keeping records from the purchases that can be later on used to develop the process. Customers should keep track from the supplier's quality and delivery record to be able to do vendor rating and at the same time give feedback to supplier. The main points to measure are price, delivery time and possible delay and quality. In the easiest form, this can be done with

basic calculation computer programs such as Excel where this information can then be illustrated with tables or other visualized ways. If company can record the feedback from end users, it should be done due to fact that it is the best possible feedback to supplier. The formulas introduced in the chapter 2.6.1 can be used to evaluate the supplier and company. (Van Weele, 2010, 62.)

2.8 Inventory expenses

Ordering large batches leads to storing and that is usually very expensive. Many things cause costs, and every person who is involved to purchasing should know that. Usually there is also loan involved to inventory which is growing and a company might also lose time discounts that are common way to motivate companies to pay their bills fast. Things that cause expenses in stocking are:

- Interests in the equity
- Environment expenses
- Work hour expenses
- Equipment depreciation
- In-house deliveries
- Obsolescence and deterioration
- Insurance expenses
- Shortage expenses

(Rauhala 2011, 189.)

Usually these expenses are 22-48% when compared to average value of the stock. The way to count these costs is explained next.

When measuring the interest in the equity that is in the inventory, one have to find out how much profit that same amount of money could make if was allocated to some other things. This return on investment (ROI) should usually be 20% to have the benefit while running a company. So if there is no ROI counts available, one can use 20% as interest in equity. Some careful estimation is that ROI number is usually in retail store between 6% and 15%. ROI number can also be calculated with the company's own interest rates and equity values. The interest in equity can be decreased by purchasing smaller quantities and selling those ordered products before the end of the payment time. Important measure for this situation is products turnover rate. The bigger the rate, less money is stacked in the inventory. So it is very important to know this if you purchase products in the company. (Hokkanen & Virtanen 2012, 164-165.)

Environmental costs mean all the expenses that the physical storage has. These costs come from the utilities such as electric, water, maintenance of building, security system of building, possible rent, property maintenance such as snow ploughing. These numbers company can just count from their statistics and then compare the monetary value to the average stock value. (Viale 1996, 39.)

The precise number of work hours involved is actually very hard to measure. These work hours are the hours that employees have used to products. It means that all hours from unpacking the products to loading them to customer should be counted. Rough estimation for these expenses is from 10% to 30% from whole personnel costs. (Rauhala 2011, 3.)

Equipment depreciation is available from the accounting. The depreciation means that: “businesses allocate the asset’s cost to the period of its useful life based on a specific depreciation period” (Aarnio 2010, lectures).

In house deliveries means all the effort used to move the products inside the store. If the storage building is not same as the store, these expenses can be pretty high. Also, if the storage is over stocked, the products need much moving and lot of effort before they can be sold. This cost is usually always only estimation. It can be measured but the effort to do it can be very expensive and long process. (Rauhala 2011, 198.)

Obsolescence and deterioration means that all the products that has stolen, lost, gone out dated, taken into company’s own use. This information should be in the company’s statistics, but if there is no information available 2% to 5% is good estimation.

3 PURCHASING AT YARD SELLING DEPARTMENT

This chapter introduces the current level of purchasing process at YSD. Ways of collecting data and sample size are discussed and then the empirical evidence is analyzed based on the questionnaire results on the appendix 3 and the theory presented in this study.

3.1 Method

The empirical evidence was collected through online survey. Questions were based on the purchasing process theory that was introduced in this study in chapter two. The platform for online survey was Webropol. First step was to decide the goals of the survey, then based on the goals the data collecting method was decided and questionnaire formulated. Even though the sample size was small, it was found out that the easiest way to collect answer was to conduct the survey with predetermined answer solutions. This way the answers could be classified and compared to each other.

The questionnaire was first tested with two employees and after that the corrections were made. The person who is the supervisor of this study in the store approved the questionnaire before it was released. Once the questionnaire was ready, the link and pre words were sent to every employee who is responsible for purchasing in YSD. All data was collected anonymously to encourage the employees to answer as truthful as possible. The questionnaire was open one week in October 2012.

3.1.1 Sample size

The questionnaire was sent to all employees except the author who are responsible for purchasing in YSD. Due to fact that there are only seven persons responsible for purchasing, all data was important to gather. The author recused himself from the questionnaire to get the as accurate results as possible. All in all, six persons answered to questionnaire, which included personnel from the storekeeper to salesmen. These results can be held reliable and reflect the current level of purchasing process at YSD.

3.1.2 Implementation

The platform for questionnaire (appendix 2) was the Webropol online survey tool. The questionnaire with the cover letter (appendices 1 and 2) was sent to all respondents through their personal email. Personal email was chosen due to fact that not all respondents have personal corporate email. The cover letter explained the reasons for this survey and shortly introduced the contents of it. It also emphasized the importance of every response and highlights that the whole questionnaire is implemented anonymously.

The whole questionnaire included 21 questions. The first three questions were classifying questions to give the image of the employees who are responsible for purchasing. Five of the questions were single choice questions, fourteen were multiple-choice question and one was open-ended. Six of the multiple-choice questions had unlimited number of answer and eleven could be only answered ones. The open-ended question was to give free speech to all respondents concerning current purchasing process. The answers from the open-ended question were useful, and reflect the same things as the answer from other questions. The questionings were formulated so that they do not lead to any opinion or answer. The questions were arranged in logical order by the purchasing process.

3.2 Classifying questions

The purpose of classifying questions was to get the image of the persons who are responsible for purchasing at YSD. The first three questions of the survey were classifying questions. Based on the author, all respondents are male and according the survey, the age distribution is that one person is from 22-25, two are 26-29 and three are over 30 years old. Two of the respondents were newcomers that have worked for the company less than one year. Three of the respondents have worked more than one year but less than three years and only one have worked more than three years but still less than five years in the company. So only one person have more work experience in the certain company.

When asking about the experience of purchasing responsibility in the company, two stated that they have been responsible for purchasing less than one year. Four of the respondents answered that they have purchased products more than one year but less than three years. None of the respondents have much experience of purchasing in this company.

3.3 Background for purchasing

According to the purchasing theory, the first thing to plan is the sales budget. All other budgets should be based on the sales budget to be able to keep track of the company's performance. The buying budget is an important tool to develop the buying process. It was asked whether the employees have had the sales budget or buying budget and the results showed that only one has had the sales budget and one buying budget. Four of the respondents have not had any budget to follow to support the purchasing process.

Respondents were asked to state their education about purchasing. The theory indicates that persons responsible should be well educated to purchase to be able to succeed in the process. All six have had education at some point in their lives. The question was "have you had enough education from purchasing at your current workplace?" The scale was from one to four, one being fully agreed and four being does not agree.

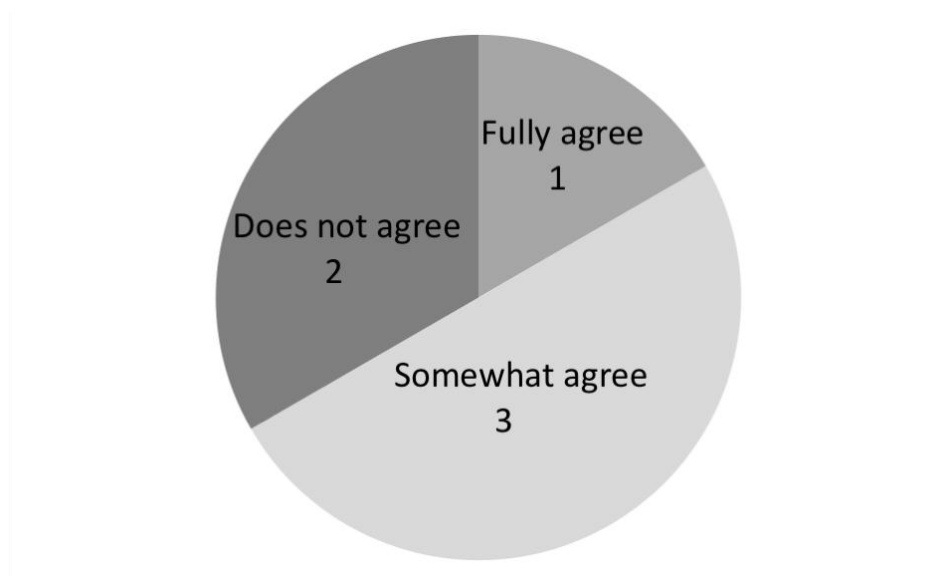


Figure 5 The education to purchasing in the current work

It seems that only one is confident about his skills in purchasing and feels like he has had enough education from his current workplace. Three of the respondents somewhat feel that they have had enough education and two states that they definitely have had too little education from the purchasing.

3.4 Tools for purchasing

There are certain tools to support the purchasing process. Based on the theory, these tools are easy to use can have huge effect to whole purchasing process. The purpose of question nine was to find out whether the persons responsible for purchasing are aware where they can find the certain tools for purchasing. Table four illustrates the situation.

Table 4 Does employee know how to get information to support purchasing

	Yes	No	Total
Sales history	5	1	6
Sales forecast	3	3	6
Current buying prices	6	0	6
Transportation process	6	0	6
Delivery time	5	1	6
Turnover number	2	4	6
Cost effectiveness	2	4	6
Total	29	13	42

As one can see, there is a clear lack of knowledge in the basic skills of purchasing. The basic tools presented in the theory are not familiar to employees or they just do not use those. Sales forecast is one of the most important tools to use while purchasing and only half of the respondents know how to find it. Also only two out of six knows where to get the turnover number and cost-effectiveness. These results combined with the results from chapter 3.3 indicate that there is a need of education to persons who are responsible for purchasing.

When respondents were asked whether they have up to date information about the products they purchase, one stated that feels to have the information. Four said that they somewhat have the up to date information and only one respondent stated that does not have up to date information about the products or the current price level.

3.5 Determining products

The theory suggested using certain tools to help making decisions concerning product range. These tools were introduced in the chapter 2.2. The goal of the question 10, “How do you decide what products you purchase?” was to find out what kind of tools and techniques employees use to make product range decisions. There were four premade options and one open option to answer this question and every respondent could

answer more than one option. The options were by sales forecasts, by ABC analyze, by ZYX analyze, by empty shelves and some other, what. If respondent answered to last option, “some other, what”, he had possibility to write his way to make decisions. Results for this question are presented in the figure six.

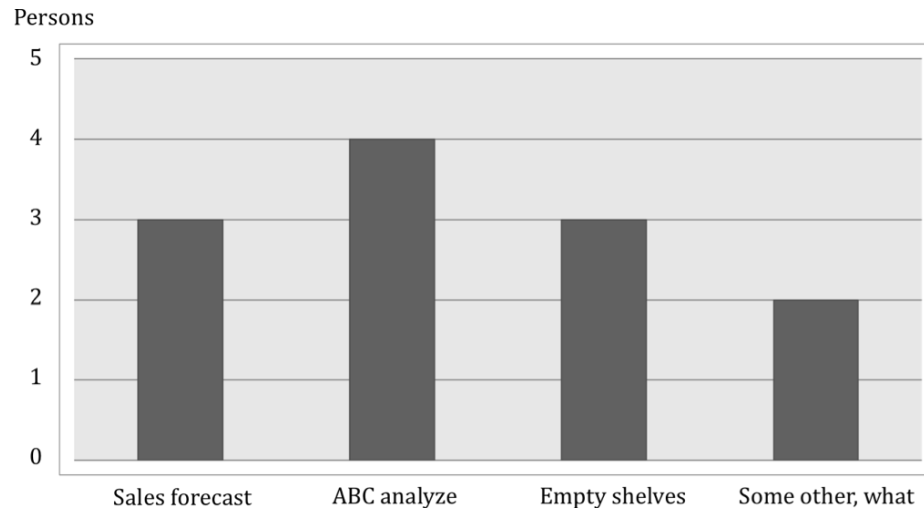


Figure 6 Product decisions

On the answer “some other, what”, respondents answered that they decide to order products by observing the stock balance and by comparing the selection of product range to available resources. Every respondent answered to this question.

The answers indicate that at least some employees use more than one technique to make decision. Using sales forecast and ABC analyze points that there is good ways to make decisions. Three respondents answered that they order products that have empty shelves can point one possible thing: some products are not ordered right when the shelf is empty. Theory suggested that person responsible for purchasing should use many different techniques to support product range decision.

3.6 Contract with the supplier

In the chapter 2.4 the theory suggested that persons responsible for purchasing should be involved to contracting to reinforce the supplier relationship. The relationship between buyer and supplier should be very good to make the whole purchasing process easier. The questions 13 and 14 inquired whether the person responsible has been involved to signing the contract or even have seen the contract or part of it.

Four respondents stated that they have been involved to contracting state and four also stated that they have seen the contract or part of it. It can be assumed that these four are the same persons so two out of six have not been involved to contracting in any way. Contract involves all the important things about the supplier relationship and at least every person responsible for purchasing should be aware of the terms.

3.7 Price of the products

Accordinging theory, every Euro that is saved in the purchasing can be added straight to profits. Question fourteen asked whether employees try to affect on the prices when purchasing even though the prices might be already settled. Four persons answered that they try to lower the prices when they order. Two said that they do not try to affect the prices anymore.

All respondents answered in the chapter 3.4 that they know the up to date buying prices but every products have its hidden costs. The figure 4 illustrated the hidden costs and these costs can affect crucially to products prices. Figure seven illustrates the knowledge of the hidden costs.

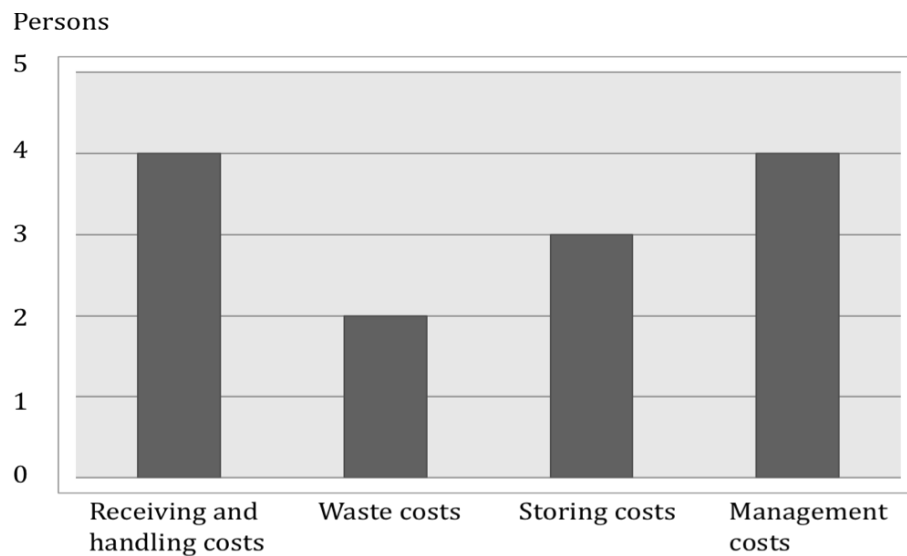


Figure 7 Knowledge about the hidden costs

As can be seen from the figure 9, there is some knowledge about the hidden costs. There was also an option; “delay and shortage costs” but none of the respondents did not choose that one. In the perfect purchasing process, there are no such costs but in the markets of building and home improvement the demand is so fluctuating that the possibility for shortage is real.

As theory introduced, these costs are easy to forget, especially when they cannot not bee seen straight from anywhere but they are there. The margin in the prices between the suppliers can be so small that the hidden costs change the cheapest supplier. Answers for this question indicate that persons are aware at least some of these costs but not from all. Improving the knowledge of these costs could launch the persons responsible to start to look for new possible products or even new suppliers. Also some of these costs can be lowered according the theory.

3.8 Ordering the products

The chapter’s 2.5.2 and 2.5.3 handled the ordering point and quantity. Getting products ordered in right time and right quantities is crucial to avoid the shortages and to reduce to owner’s equity in the stock. The savings can be huge when products are ordered in right batches. The conducted survey searched when the employees order more products. The question 15 asked: “How do you decide when you order more products?” and results are illustrated in the figure eight.

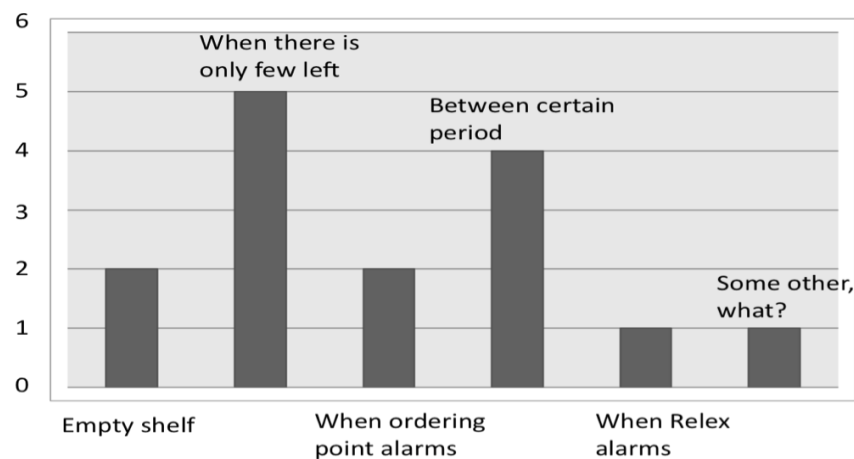


Figure 8 When respondents order products

In this question “some other, what?”, respondent answered that he orders more products when there is a less than half’s month worth of products in the stock. According the theory, the points to order should be whether planned in time or by ordering points. One respondent announced that his products are in Relex and it helps the person to order in right time. Empty shelf tactics, when there is only a few left, are not so good because it enables possible shortages.

Quantity is one of the hardest parts to estimate. As theory presented, the current shopkeepers want to decrease the value of the stock, orders should only cover few weeks from the payment time. It was asked from the respondents how they decide the amount of the ordered products. Almost every person stated that they use sales forecasts to decide the size of the batch. In the chapter 3.4 three respondents answered that they do not know how they get the sales forecast so it can be assumed that they still know how to use it somebody gives it to them. What was worrying in the answers is that two persons stated that they order based on the empty

places in the shelf. This way slow moving products might be ordered and paying the products in the payment time lost. Also five answered that free or decreased delivery costs affect to the quantity of orders. Only three of the respondents take payment time into consideration while ordering.

3.9 Contacting supplier and transportation

The respondents were asked how they deliver the actual order to suppliers. With three answers, the most common way to deliver the order to supplier is via suppliers' web program. Two stated that usually they deliver the order by email and one said that he does his orders by phone. These answers indicate that there is very little personal contact with the supplier.

The chapter 2.5.5 handled the transportation methods. According theory, transportation costs might be the highest costs of purchasing. Question eighteen asked "how do you decide the delivery method to purchased products?". Figure nine illustrates the answers.

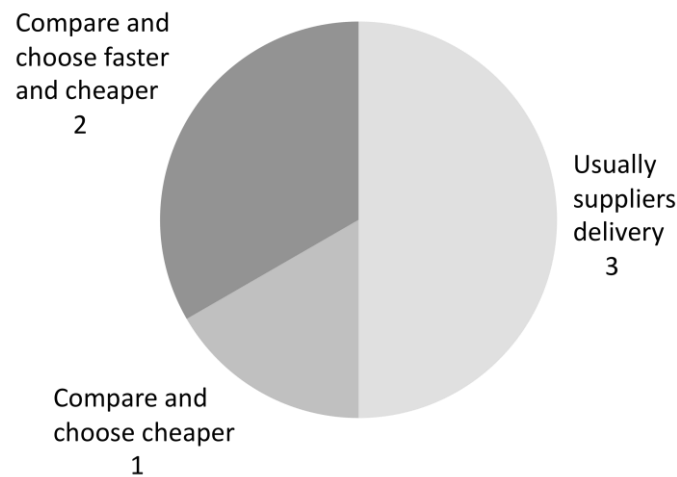


Figure 9 What transportation method employees use

As theory points, the most expensive activity in purchasing is usually transportation. Only three out of six says that they compare the transportation prices and chooses cheaper method. Three of the respondents state that usually they just pick the suppliers delivery without comparing the prices.

3.10 Expediting and follow up

The last two steps of the purchasing process are expediting and follow up. According to the theory, expediting is a part of quality control and gives information, which can be used to avoid shortage. Question nineteen asked what kind of information is asked during the ordering from the supplier. All six respondents answered that they request to have the ordering confirmation from the supplier that includes prices. Besides this, two also request the routine status check to be sure that the delivery will be on time. This means, when the invoice from the products arrive, there is less work with correcting the invoice. Routine status check should be a basic activity while purchasing to avoid shortage and give the valuable information to salesmen.

The main point for follow up is to get valuable information to develop customers and suppliers process and habits. The chapter 2.7 handled the follow up process and gave examples about measured things. The respondents were asked to state their information gathering procedure and figure ten illustrates their answers.

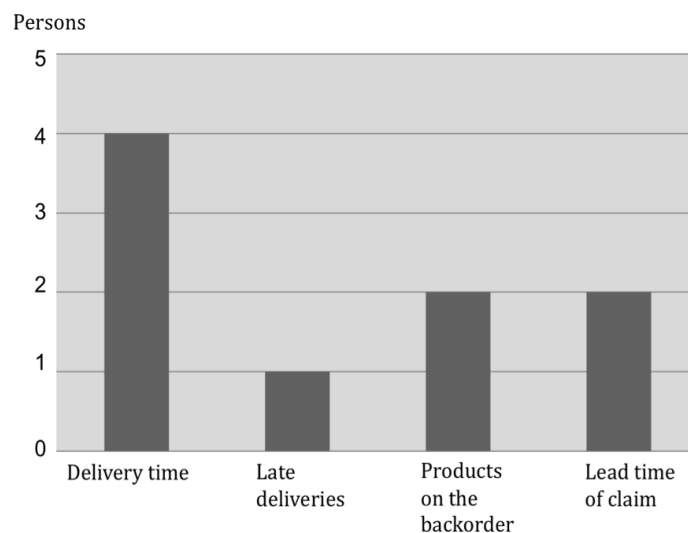


Figure 10 Information gathering in the company

There was also an open answer option on the questionnaire but none of the respondents chose that option. The answers indicate that some employees keep on track at least more than two statistics from the suppliers. Four out of six stated that they have statistics about the delivery times but only one respondent keeps track on the late deliveries. Two answered that they have records from the products that were left to back order and two said to have the records about the lead-time of claim. The results point out that some persons have the knowledge to do the follow up but there is also some need of education.

4 PURCHASING GUIDE FOR YARD SELLING DEPARTMENT

After introducing the results from the questionnaire to commissioning company, it was decided that the best solution is to create guide for purchasing. The aim of the guide is to educate employees about purchasing and offer solutions for purchasing problems. In the best case, the guide will also help the company to decrease the owners equity bound in the stock and decrease the number of out dated products. The guide will go through easy solutions how to improve the purchasing process step by step from the beginning of purchasing to the end. The guide includes examples from the real products sold in the commissioning company and there is plan for purchasing for the year 2013. The plan goes through one product group from the one supplier and the techniques can be applied to other product groups too. It was also decided that this study will not concentrate on the use of company's ERP system and its use will be educated to employees by the head of the department. All suggestions are based on the knowledge gained from the theory introduced in the chapter 2 and real product information from the commissioning company's databank.

4.1 Purchasing plan for Plasters

There are 30 different plaster products located at the YSD and the guide will go through all of those. The product group number in the company's ERP program is 10015 and it will later on show on all company's documents.

The storekeeper gave the planned sales budget for the year 2013 that is €91000 and the buying budget is €78260. With these numbers, the store is trying to get profit margin of 14% and €12740 profits from this product group. These are the guidelines that the purchasing plan has to follow on the year 2013.

Even though the supplier is already decided, the next chapter will go through why commissioning company has chosen the current supplier over another even though both companies have similar products on the markets.

4.1.1 Selecting current supplier

Current supplier is the worlds leading manufacturer of premixed plasters. As told in the chapter 2.3, Company Y had some problems with their plaster products and they handled the customer feedback poorly. Since then, the professionals have favour current supplier and used their products. Also, current supplier has products that are easier to use and faster to handle. Current supplier has very well executed e-learning premises on their WebPages that everyone can use for free and their customer service has gain a lot of appreciation. People simply trust on current supplier. Also, the stores data shows that current supplier is more popular and brings more profit than company Y.

4.1.2 The product decisions and supervision

To decide what products are important to company, ABC and XYZ analysis were created. When combining these two analyses, one can easily see what products are really important to company and needs special supervision.

Table 5 Combination of ABC and XYZ analysis from product group 10015, plasters

ABC class	Name	Sales	XYZ class	Transactions
A	AAAA	15775	X	4324
A	BBBB	4622	Z	287
A	CCCC	4588	Z	63
A	DDDD	3935	Y	1066
B	EEEE	3869	Y	1023
B	FFFF	3068	Z	340
B	GGGG	2420	Z	201
B	HHHH	1827	Z	23
B	IIII	1795	Z	80
B	JJJJ	1527	Z	6
B	KKKK	1298	Z	237
C	LLLL	1217	Z	68
C	MMMM	1103	Z	272
C	NNNN	1066	Z	10
C	OOOO	1048	Z	89
C	PPPP	870	Z	230
C	QQQQ	735	Z	12
C	RRRR	732	Z	136
C	SSSS	639	Z	11
C	TTTT	506	Z	9
C	UUUU	458	Z	84
C	VVVV	396	Z	21
C	XXXX	372	Z	85
C	YYYY	276	Z	18
C	ZZZZ	272	Z	20
C	AAAA	231	Z	21
D	AAAA	215	Z	41
D	OOOO	197	Z	11
D	&&&&	195	Z	3
D	????	45	Z	2

As one can see from the table five, there is only one product that belongs to A class and also in X class. Products that belong to A and Y class needs special supervisions with the product on the A and X class. These products should always be available to customers because these are the most beneficial ones. When purchasing plasters, these two products should be always ordered.

Products that are in A and Z class should mainly be order products but these BBBB and CCCC are critical products and needs to be available immediately to customers. These are basic products that customers expect to be in stock

EEEE is a product that belongs in B and Y class. This is very basic product in building and needs to be in the stock. It is cheap and can be sold inside the payment time. Also, there is just a little possibility to break or go out dated.

B and Z class products with C and Z class products should only be stocked if those are critical. The products that are sold less than quantity of one pallet in a year should not be stocked, besides ones that weight 1000kg or 500kg. As stated before, these products have one year usage time and if there is some that are probably to out date, those should only be order products. There is four products that should be removed from the stock; ÅÅÅÅ, ZZZZ, YYY Y and VVVV. The monetary beneficial from selling these is not enough to cover the loss of out dated products.

In this case, the products that are in D and Z class are either new or the ones that are supposed to remove from the stock. The new ones do not have had enough time to create statistics that are reliable so those need more time. Only new products that are in D and Z class should have position in the shelves.

If there would be B and Y class products, they should be available in stock. Only special products that have high possibility to ruin should be order products.

There are no products that belong to C and X or C and Y class. But if there were some, they should usually be in the stock except if there is some special products such as easily fragile products.

4.1.3 Contract with the current supplier

Now when we know the products that are important to company, it is time to check the contract. Every buyer has to know the terms of supplier contract. If the order is done through concepts own order program, there will be extra 2% discount as an order style discount. The 2% will come if the bill is paid in time. The contract includes prices for each product.

The agreed payment time for products is 21 days and when the bill is paid in time, the commissioning company gets 2% cash register discount. The contract includes the knowledge about transportation costs and information how to handle claims. All this information is stated in the contract that can be found from the concepts intranet.

4.1.4 Order preferences

Now we know the important products and terms of supplier agreement, it is time to think when do we do order. To be able to determine the ordering point, one first has to have knowledge about safety stock. Safety stock can be determined by comparing the sales forecast to actual sales. The examination time should be at least one year and the difference between forecast and sales should be calculated to every month. First step is to investigate the period of one year to see if the sales are stable. The figure eleven illustrates the sales of plaster on the year 2011.

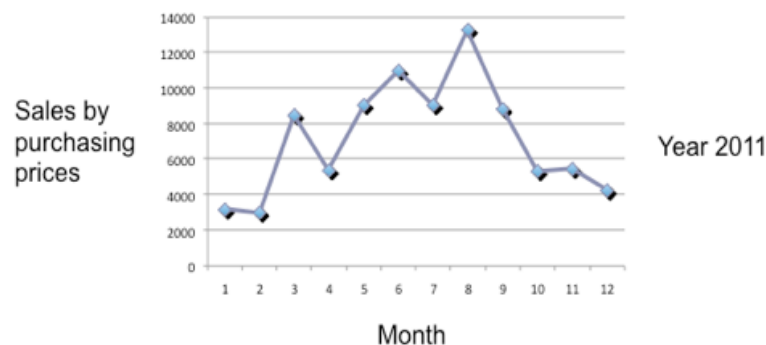


Figure 11 Sales of product group 10015, plasters in the year 2011

The sales of the year 2011 reveal that there is a peak in the sales during summer time. The sales are much higher in the summer than in winter and this can easily be explained by the fact that building is much common in the summer. The figure twelve illustrates the sales of year 2012 until November just to be sure that the same pattern occurs there.

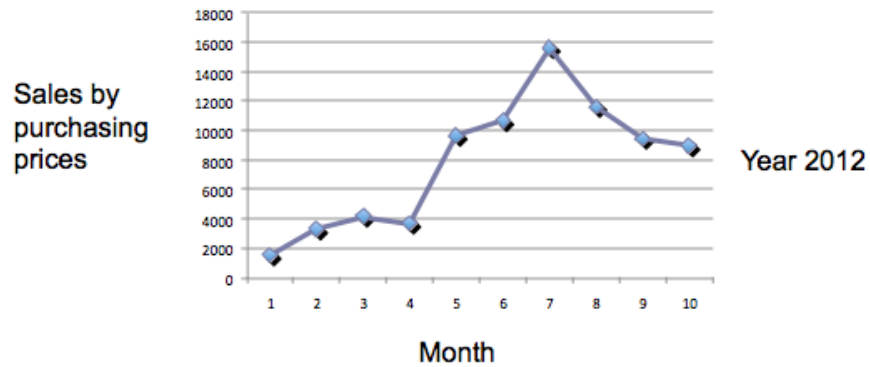


Figure 12 Sales of products group 10015, plasters in the year 2012

The sales of 2012 show the same peak as the sales of 2011. In the year 2012 the peak starts from the April and seems to end to October. The demand of this product group is really fluctuating and might require to safety stock points to be able to satisfy the need efficiency. The year 2013 safety stock plan can be divided in two parts. From months April to October the safety stock limit could be higher and from November to March lower. With this solution, the company can avoid better shortages and useless owners equity in the stock.

Safety stock limit can be determined by comparing the sales forecasts to actual sales. Development in the sales for the year 2012 was forecasted to be 2%. The person responsible for ordering should calculate this extra 2% to last year’s sales to find out the forecasted quantity. The table six shows how to count safety stock from the one product. The forecasted quantity is already calculated by adding 2% to year 2012 sales.

AAAA, sales compared to forecast in the year 2012 and plan for the year 2013						
Month	Forecast 2012	Actualize 2012	Error	Squared error	Forecast 2013	Ordering point
Jan	133	58	-75	5625	59	107
Feb	60	148	88	7744	151	107
Mar	159	52	-107	11449	53	107
Apr	198	169	-29	841	172	107
May	575	496	-79	6241	506	217
June	512	566	54	2916	578	217
July	666	615	-51	2601	628	217
Aug	547	477	-70	4900	487	217
Sept	496	525	29	841	536	217
Oct	295	274	-21	441	280	217
Total	3641	3380	-261	43599	3450	

Table 6 Comparing the sales forecasts in product group 10015, plasters

Forecast can be calculated by the person responsible itself by adding 2% to year 2011 sales. Actualize is picked up from the statistics of Profix and error is the difference between the actual sales and forecast. The last column is calculated by counting the power of error number. The suggestion is to divide the year in two different safety stocks. The safety stock can be calculated with following formula:

$$\sqrt{[(\text{the sum of squared errors for certain months}) / \text{amount of months}]}$$

The safety stock for S 100, 25kg plaster in the winter:

$$\sqrt{[(5625+7744+11449+841) / 4]} = 80,09$$

The safety stock for S 100, 25kg plaster in the summer:

$$\sqrt{[(6241+2916+2601+4900+841+441) / 6]} = 54,68$$

The forecast for summer 2012 seems to be more accurate than the forecast for the winter. The safety stock for the summer should be 55 and for winter 80. With these safety stocks, the company should be able to avoid shortages and decrease the unnecessary owners' equity in the stock. These calculations are repeated to every product from the products group 10015, plaster to find out the safety stock limits. From the table seven, one can see the safety stocks to other products from that same group.

Table 7 Safety stocks for product group 10015, plasters

ABC class	Name	Sales	XYZ class	Transaction	Winter	Summer
A	AAAA	15775	X	4324	80	55
A	BBBB	4622	Z	287	4	11
A	CCCC	4588	Z	63	2	5
A	DDDD	3935	Y	1066	83	64
B	EEEE	3869	Y	1023	69	81
B	GGGG	3068	Z	340	38	23
B	HHHH	2420	Z	201	11	12
B	IIII	1827	Z	23	2	5
B	JJJJ	1795	Z	80	3	17
B	KKKK	1527	Z	6	No stocking	No stocking
B	LLLL	1298	Z	237	22	22
C	MMMM	1217	Z	68	No stocking	No stocking
C	Leca laasti, 25l	1103	Z	272	10	45
C	NNNN	1066	Z	10	1	2
C	OOOO	1048	Z	89	14	17
C	PPPP	870	Z	230	51	7
C	QQQQ	735	Z	12	3	0
C	RRRR	732	Z	136	6	13
C	SSSS	639	Z	11	1	1
C	TTTT	506	Z	9	1	2
C	UUUU	458	Z	84	19	17
C	VVVV	396	Z	21	No stocking	No stocking
C	XXXX	372	Z	85	2	17
C	YYYY	276	Z	18	No stocking	No stocking
C	ZZZZ	272	Z	20	0	10
C	AAAA	231	Z	21	No stocking	No stocking
D	AAAA	215	Z	41	0	10
D	OOOO	197	Z	11	No stocking	No stocking
D	&&&&	195	Z	3	No stocking	No stocking
D	????	45	Z	2	5	10

One can see from the table nine that the safety limits varies from each product. Some have better forecasts because of stable demand and some products have very fluctuating demand. The products that have no stocking in the safety stock column should be removed from the stock because their sales in one year are less than minimum order batch and that is why the possibility to out date is high. Winter products such as ZZZZ and ÄÄÄÄ should be in the stock because it gives customers the image of well-equipped store. ???? is new product and it should be given more time.

Next thing to find out is ordering point. Ordering point can be calculated by adding the forecast of sales from the time that company have to wait the order to arrive in the store to safety stock. The current supplier usually has four days delivery time. In this case the company could use the same interval of time to achieve ordering rhythm. The benefit of this is that the batch size can be easily measured when it should be sold inside the payment time. Also others are aware of orders and that way they can info the person responsible for ordering if they need to have some other order products from the current supplier. Relex could be used to back up the availability just to alert if there is bigger fluctuation in sales that the safety stock can handle. The minimum quantity (same as safety stock added with sales in the order time) could be the limit in Relex to alarm.

Ordering rhythm for the current supplier could be two weeks. These two weeks comes from the fact that the payment time for the current supplier is 21 days and the goal is to sell the ordered products inside that payment time. The products that belong to A class in ABC analysis, should be ordered every time. The ordering rhythm of B and C class products is longer and especially C class products are ordered very randomly. Next table will illustrates the sales forecast and safety stocks for AAAA for the first 10 months in the year 2013. The forecasted increase in sales for the year 2013 is also 2% just like it was on the previous year. The alarm point for Relex is also calculated on the table eight. The alarm point in this case is calculated by adding the average sales during ordering time from each month to the safety stock limit. Both winter and summer ordering points are calculated separately.

Table 8 AAAA sales forecast and ordering point for the year 2013

Month	Forecast 2012	Actualize 2012	Error	Squared error	Forecast 2013	Ordering point
Jan	133	58	-75	5625	59	107
Feb	60	148	88	7744	151	107
Mar	159	52	-107	11449	53	107
Apr	198	169	-29	841	172	107
May	575	496	-79	6241	506	217
June	512	566	54	2916	578	217
July	666	615	-51	2601	628	217
Aug	547	477	-70	4900	487	217
Sept	496	525	29	841	536	217
Oct	295	274	-21	441	280	217
Total	3641	3380	-261	43599	3450	

Winter safety stock 80

Summer safety stock 55

The table nine shows that the ordering point for winter should be 107 pieces. When the order is done when the stock is 107, the products should arrive in time before shortage. The same number for summer is 217. The formula for counting ordering point for the winter in the year 2013 was:

$$(\text{forecast for Jan} + \text{Feb} + \text{Mar} + \text{Apr}) / 4 + \text{winter safety stock}$$

The table nine shows ordering points for all products in the product group 10015, plasters.

Table 9 Ordering points for current supplier' products

ABC class	Name	Winter safety	Summer safety	Winter ordering	Summer ordering
A	AAAA	80	55	107	217
A	BBBB	4	11	5	15
A	CCCC	2	5	3	7
A	DDDD	83	64	91	100
B	EEEE	69	81	92	105
B	FFFF	38	23	40	38
B	GGGG	11	12	13	19
B	HHHH	2	5	2	5
B	IIII	3	17	5	19
B	JJJJ	No stocking	No stocking	No stocking	No stocking
B	KKKK	22	22	25	26
C	LLLL	No stocking	No stocking	No stocking	No stocking
C	MMMM	10	45		
C	NNNN	1	2	1	2
C	OOOO	14	17	17	19
C	PPPP	7	51	9	59
C	QQQQ	1	3	1	3
C	RRRR	6	13	6	13
C	SSSS	1	1	1	1
C	TTTT	1	2	1	2
C	UUUU	19	17	20	20
C	VVVV	No stocking	No stocking	No stocking	No stocking
C	XXXX	2	17	2	21
C	YYYY	No stocking	No stocking	No stocking	No stocking
C	ZZZZ	0	10	10	0
C	AAAA	No stocking	No stocking	No stocking	No stocking
D	AAAA	0	10	10	0
D	OOOO	No stocking	No stocking	No stocking	No stocking
D	&&&&	No stocking	No stocking	No stocking	No stocking
D	????	5	10	5	10

After finding out the safety stocks, it is time to determine the quantity the ordered products. The minimum quantity of ordered products is one pallet or one sack (products that weight 500kg or 1000kg). When the goal is to sell ordered products inside the payment time, the ordered quantity should only cover half of the month. Now, when the months forecasted sales are divided by two, the ordered quantity is revealed. There are some products that are not sold whole pallet in one year that needs special arrangements. In this case, one option could be cooperation with some other company. If they have similar situation, the products could be ordered together to minimize the possibility of out dated products. As stated before, every

order should include A class products but the person responsible have to be aware of the stock quantities to be sure that the products really are sold. These tools are only to help the employees and the purchasing process still needs employee's attention in all stages of purchasing.

The transportation of goods is always a tricky part of the purchasing. The options that every purchasing personnel have are supplier's transportation and outsourced transportation. In this case, supplier should deliver the products when those are ordered from the factory.

Plasters should always be ordered via concepts Web program. This electronic ordering gives 2% order style discount. If the order is done other ways, the discount is not available. This Web program is very easy to use and fast. The customer only has to select purchased products and transportation style. There is also free space for any marking if needed. The only downside of this program is that there is no any real contact with the supplier. To cherish the relationship between buyer and supplier, the person responsible for purchasing could call to supplier right after the order has been delivered. The meaning of this phone call is to keep up the cooperation with supplier and gives nice possibility to ask for extra discounts. The main reason for this phone call can for example be; asking for order confirmation and at the same time some discounts. When asking for discounts, both sides have to understand that they both will not always get what they want. The relationship between the supplier and customer is interaction where both sometimes have to give some leash.

4.1.5 Expediting supplier

When the buyer has delivered order to supplier, it is not only supplier's responsibility to be sure that the order will be delivered in time. Expediting supplier can be easily done with simple phone call. Expediting should not be taken as lack of trust to supplier but more like kind remembering and being prepared to any delay on supply. This is just like the phone call that can be done right after the order is been delivered. At the same time, it is again important to value the relationship with the supplier. If there is any inconvenience in the supply, the buyer gets the knowledge early and can be prepared.

4.1.6 Keeping records from orders

This part includes recording valuable information about supplier’s habits. Record should be kept from every thing that supplier does; delivery time, backorders, errors, lead-time in claims and time taken to claims. Also if there is some end-user feedback available, it should be recorded. Very easy way to keep up the records is create simple chart with Excel or open office calculation tool. The table ten shows an example about chart that could be used to record the data.

Table 10 Example of keeping records from the supplier

Weber supply records	
Order number	
Order date	
Delivery date	
Weight of products	
Transportation fee	
Products in the backorder	
Errors in delivery	
Lead-time in claims	
Time taken to make claim	

As one can see from the table thirteen, keeping records does not take a lot of time. Ones the person responsible for purchasing has created a table, filling it is not very time consuming thing. The reason why records are kept is that both supplier and buyer can develop their habits. From time to time, the records should be shown to supplier and if there is some problem, those could be solved. Sometimes there are problems that even the supplier does not realize until the customer gives the feedback.

4.1.7 Postscript

This was a suggestion how the commissioning company could implement their purchasing process. The aim of this guide is to educate and give ideas to persons responsible for purchasing at the commissioning company. By using techniques introduced in this guidebook, the commissioning company have a change to increase their service level and at the same time, decrease the owner’s equity in the stock.

5 CONCLUSIONS

The competition of selling building and home improvement products is tough. The markets set the selling prices to most of the products and margin of profits is small. Selling price cannot be increased due to fact that demand and supply will eventually set the equilibrium price to products. Buying right does not affect only straight to products prices but also decrease the hidden costs that products generate. This benefit that the company gets from buying products right can straight be seen on the last column of the income statement. Company X commissioned this thesis and the aim of it was to develop the purchasing process of products that are located to YSD.

Company X works in the field of selling building and home improvement products. Commissioning company have four different departments in the company structure and this study concentrates to Building and HVAC department and especially to Yard selling department that is located under the Building and HVAC because of financial reasons. The YSD has products from several different product groups and the weight is on to bigger building products. The five different main groups of products are:

- Foundations and façade
- Insulating material
- Building frame materials and accessories
- Covering materials and accessories
- Lumber
- HVAC

These products are purchased manually meaning that every person responsible has to make decisions by themselves concerning the purchased batches. The company has automatic reinforcements planning programme but it cannot be used totally due to fact that the demand is very fluctuating. The employees of YSD and building and HVAC are responsible for ordering the products. Totally seven persons has that responsibility the author of this study is one of those.

The theory concerning purchasing was studied to gain the base knowledge of the topic. The base for the purchasing process was gathered from the book: *Purchasing and Supply Chain Management: Analysis, Strategy, Planning and Practise* made by Arjan Van Weele. His theory of eight-step purchasing process was used as a basis of the theory part. The theory handles every eight steps and seek another view concerning purchasing from other sources. Books of Jouni Sakki played also major role when studying the purchasing process and logistical actions.

First step that launches the purchasing process is the demand. In this case the demand comes from the customers.

Second step is determining specifications. This step was examined and most suitable techniques to commissioning company were chosen. ABC and ZYX analyses and the combination of those are available for persons responsible for purchasing so those were the introduced techniques.

Third step is choosing the supplier. This step was also covered with ABC analysis but also the total costs structure of products was introduced. The customers' peer pressure plays also in big role in the supplier selection.

Fourth step is contracting. The theory goes through only the main points of contracting due to fact that the shopkeepers make the decisions concerning the contracts with suppliers.

Fifth step is ordering. This step is the biggest part of the theory in this study and it goes through answers to questions: who, when, how much, how to order and how to transport.

Sixth step deals with expediting. It presents easy and fast ways to do the expediting of order to secure the delivery

Seventh step is follow and evaluation. The theory introduced some very basic techniques and calculations to deal this part of the purchasing process.

Last step is giving the information back to the supplier. This is the stage that can offer huge benefit to supplier and that way to customers.

The empirical evidence was gathered using Webropol survey program. The questionnaire was developed based on the theory presented in this study and all data was gathered and analyzed anonymously. The purpose of the questionnaire was to find out current knowledge and techniques concerning the purchasing process in the commissioning company. The survey included 21 questions and every six respondents answered to all questions. The survey had three classifying questions to build an image of persons responsible for purchasing. The last 18 questions tried to find out the knowledge of the persons responsible for purchasing. The questionnaire was open one week at October 2012.

The data given by survey was analyzed and results stated. The analyzed data indicates that there is lack of knowledge concerning the purchasing process. The respondents are all over 22 years old and have worked for the company maximum of 5 years. All of the respondents were men. The respondents have been responsible for purchasing less than three years and only one stated that he has have enough education concerning purchasing process. Some respondents that is not familiar with the basic data such as ABC and ZYX analyses. Also, the results that indicated that the purchased quantity is decided by empty shelf ringed the bell that there is a need for education. All in all, the results from the survey indicated that there is a need of education.

To improve purchasing process, the guidebook for employees was developed. The guidebook presents purchasing process via example of one of the company's supplier that is the supplier of plasters. The guidebook progress the reader in logical order of purchasing process and gives techniques and tactics that the persons responsible for purchasing could use. It shows how the decisions about suppliers and purchased products could be done in order to make purchasing more beneficial to company. Using this guide as an example, the company could educate their employees to success better in the purchasing process.

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Cover letter

Dear colleagues,

Would you spend few minutes to answer the questionnaire developed to search the level of knowledge concerning the purchasing process. I am studying international business and the questionnaire is a part of my thesis process at Hamk University of applied sciences.

The whole questionnaire is implemented anonymously meaning that no respondents can be tracked or individual answers used. The aim is to create overall picture about the level of knowledge and skills to be able to develop the guidebook. The questionnaire is open one week, meaning that the last day to answer is 21st of October. Please answer to all questions trustfully. All responses are important.

You can start answering to questionnaire by clicking the link below, it will take only few minutes.

<http://www.webpolsurveys.com/S/C89D65F33F073F95.par>

If there are some questions, please do not hesitate to ask.

Best Regards,

Matti

Questionnaire

Hankintaprosessi

Tämän kyselyn tarkoitus on selvittää nykyinen hankintaprosessi ja siihen liittyvä tieto-taito taso. Kysely jakautuu kahteen osaan; ensimmäisessä osassa ovat luokittelevat kysymykset ja toisessa osassa selvitetään nykyistä hankintaprosessia. Kysely suoritetaan anonyyminä ja vastaukset käsitellään luottamuksellisesti.

Osa yksi: luokittelevat kysymykset

1. Kuinka vanha olet? *

- 18-21 22-25 26-29 30-

2. Kuinka kauan olet ollut töissä tässä yrityksessä? *

- 0-1 vuotta 1-3 vuotta 3-5 vuotta 5-

3. Kuinka kauan olet ollut vastuussa tuotteiden hankinnasta? *

- 0-1 vuotta 1-3 vuotta 3-5 vuotta 5- vuotta

4. Olen saanut riittävästi koulusta nykyisessä työpaikassani hankinnoista? *

- Täysin samaa mieltä Jokseenkin samaa mieltä Jokseenkin eri mieltä Täysin eri mieltä

5. Olen saanut koulutusta hankinnoista: (voit valita useamman vaihtoehdon) *

- Koulussa
 Vanhassa työpaikassani
 Jossain muualla, missä?

6. Olet tuoteryhmävastaava. Tiedätkö että tuoteryhmävastaajan tehtäviin kuuluu: *

	Tiedän	En tiedä
Tuotteiden hinnoittelu	<input type="radio"/>	<input type="radio"/>
Tuotteiden esillepano	<input type="radio"/>	<input type="radio"/>
Tuotteiden saldon oikeellisuus	<input type="radio"/>	<input type="radio"/>
Uusien mahdollisten tuotteiden kartoitus	<input type="radio"/>	<input type="radio"/>

7. Minulla on mielestäni ajantasainen tieto hankkimistani tuotteista ja niiden hintatasosta? *

- Täysin samaa mieltä
 Jokseenkin samaa mieltä
 Jokseenkin eri mieltä
 Täysin eri mieltä

8. Oletko saanut ostobudjetin ja/tai myyntibudjetin? *

- Olen saanut ostobudjetin
- Olen saanut myyntibudjetin
- Olen saanut osto -ja myyntibudjetin
- En ole saanut kumpaakaan

Osa kaksi: Nykyinen tilausprosessi

9. Tiedätkö kuinka saat seuraavat tiedot tukemaan hankintaa? *

	Tiedän	En tiedä
Myyntihistorian edellisiltä kausilta?	<input type="radio"/>	<input type="radio"/>
Tulevat myyntiennusteet?	<input type="radio"/>	<input type="radio"/>
Ajantasaiset ostohinnat?	<input type="radio"/>	<input type="radio"/>
Kuljetushinnaston?	<input type="radio"/>	<input type="radio"/>
Toimitusajan?	<input type="radio"/>	<input type="radio"/>
Kierrosnopeuden?	<input type="radio"/>	<input type="radio"/>
Kannattavuusluvun?	<input type="radio"/>	<input type="radio"/>

10. Kuinka päätät mitä tuotteita tilaat? (voit valita useamman vaihtoehdon) *

- Tulevilla myyntiennusteilla
- ABC analyysillä
- ZYX analyysillä
- Tyhjillä hyllypaikoilla
- Jollain muulla, millä?

11. Oletko tietoinen tilaamiesi tuotteiden piilokuluista kuten? (voit valita useamman vaihtoehdon) *

- Tuloutus -ja käsittely kulut
- Myöhästymis -ja puutekuluista
- Jätekuluista
- Säilytyskuluista
- Tuotteen esillepano sekä siirtämiskuluista

12. Oletko ollut mukana toimittajan sopimuksen teossa tai neuvotteluissa? *

- Kyllä
- Ei

13. Oletko lukenut toimittajan kanssa tehtyä sopimusta tai osaa siitä? *

- Kyllä
 Ei

14. Kun teet hankintoja yritätkö vaikuttaa vielä hintoihin vaikka ne ovat ehkä jo ennalta määritetyt? *

- Kyllä
 Ei

15. Kuinka päätät koska tilaat tuotteita? (voit valita useamman vaihtoehdon) *

- Kun ne ovat loppu
 Kun niitä on hyllyssä enään vähän jäljellä (silmämääräisesti vähän)
 Tietyn ajanjakson välein
 Kun relex ilmoittaa tilausehdotuksen
 Kun ennalta määritelty tilauspiste tuotteiden määrästä ilmenee
 Jokin muu, mikä?

16. Kuinka päätät kuinka paljon tilaat tuotteita? (voit valita useamman vaihtoehdon) *

- Myyntiennusteilla
 Niin että tuotteet myydään maksuajan sisällä pois
 Niin, että tyhjät hyllypaikat tulevat täyteen
 Niin sanotulla täyden auton taktilla eli aina täysi autollinen tavaraa
 Ilmaisella tai alennetulla rahtimaksulla, joka tulee kun tilataan isompi määrä
 Jollain muulla, millä?

17. Kuinka toimitat yleensä tilauksen toimittajalle? *

- Puhelimella
 Sähköpostilla
 Faxilla
 Toimittajan sähköisellä tilausjärjestelmällä

18. Kuinka valitset toimitustavan tilaamasi tuotteiden kuljetuksille *

- Yleensä tehtaan kuljetus
 Yleensä oma kuljetus
 Vertaan hintoja ja valitsen halvemman
 Vertaan hintoja ja valitsen nopeimman
 Vertaan hintoja ja valitsen halvemman sekä nopeimman
 Jokin muu, mikä?

19. Pyydätkö toimittajalta seuraavia asioita tilauksen aikana? (voit valita useamman vaihtoehdon) *

- Toimitusvahvistuksen
- Toimitusvahvistuksen hintojen kanssa
- Tilanne tietoja toimituksen etenemisestä kun tilaus on tehty mutta ei vielä toimitettu
- Jotain muuta tietoa, mitä?

20. Pidätkö tilastoja seuraavista asioista koskien toimituksia? (voit valita useamman vaihtoehdon) *

- Toimitusaika
- Myöhästyneet toimitukset
- Jälkitoimitukseen jääneet tavarat
- Reklamaation läpimenoaika
- Jostain muusta, mistä

21. Vapaa sana, voit kirjoittaa tähän mielipiteesi koskien nykyistä tilausprosessia tai siihen liittyviä asioita. Kirjoita myös jos sinulla on parannusehdotuksia tms. *

Lähetä

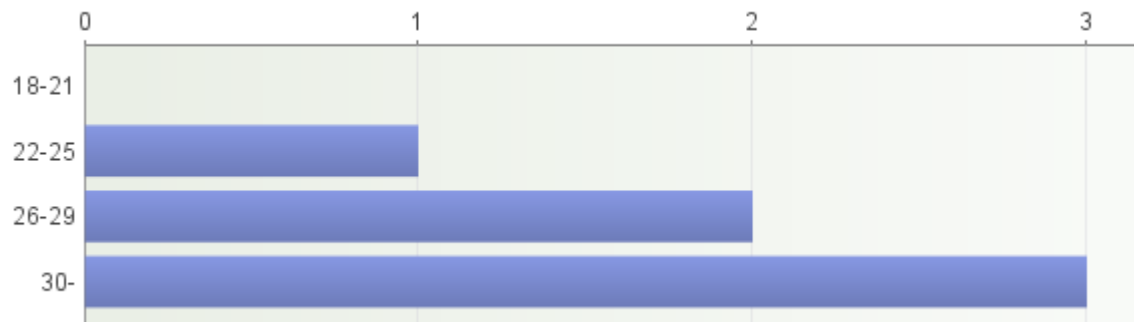


Questionnaire results

Hankintaprosessi

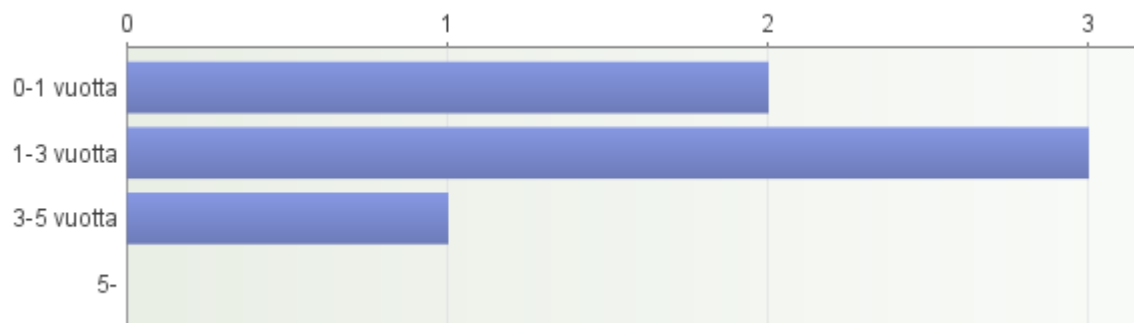
1. Kuinka vanha olet?

Vastaajien määrä: 6



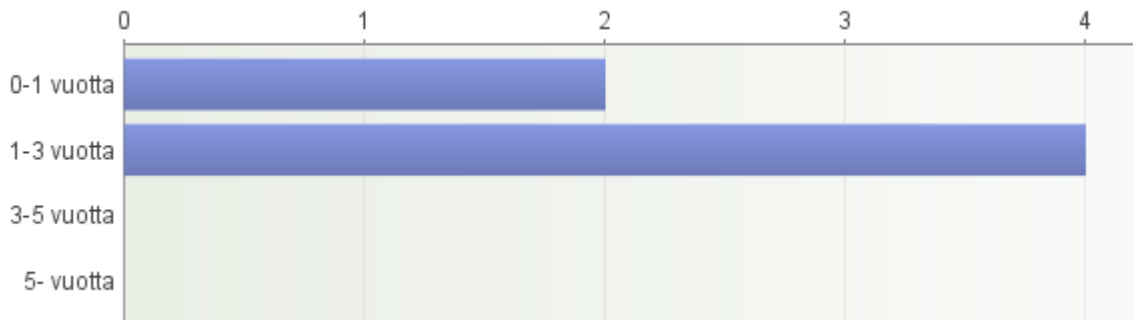
2. Kuinka kauan olet ollut töissä tässä yrityksessä?

Vastaajien määrä: 6



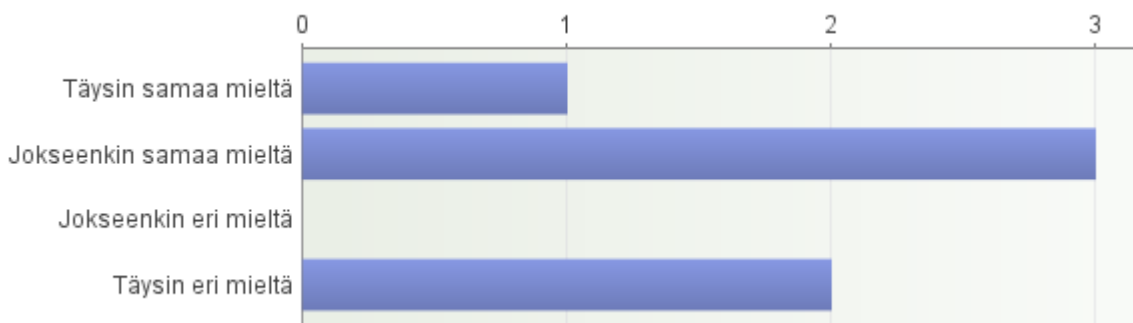
3. Kuinka kauan olet ollut vastuussa tuotteiden hankinnasta?

Vastaajien määrä: 6



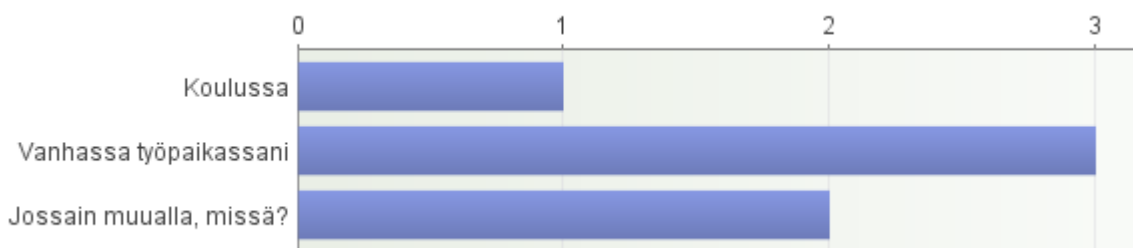
4. Olen saanut riittävästi koulusta nykyisessä työpaikassani hankinnoista?

Vastaajien määrä: 6



5. Olen saanut koulutusta hankinnoista: (voit valita useamman vaihtoehdon)

Vastaajien määrä: 6



Avoimet vastaukset: Jossain muualla, missä?

- nykyisessä työpaikassa
- esimieheltä. satunnaisen tarpeen kohdatessa.l

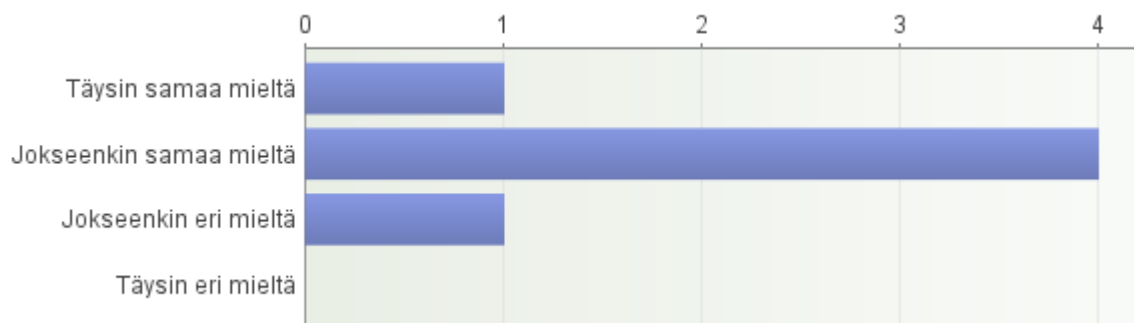
6. Olet tuoteryhmävastaava. Tiedätkö että tuoteryhmävastaajan tehtäviin kuuluu:

Vastaajien määrä: 6

	Tiedän	En tiedä	Yhteensä	Keskiarvo
Tuotteiden hinnoittelu	6	0	6	1
Tuotteiden esillepano	5	1	6	1,17
Tuotteiden saldon oikeellisuus	5	1	6	1,17
Uusien mahdollisten tuotteiden kartoitus	6	0	6	1
Yhteensä	22	2	24	1,08

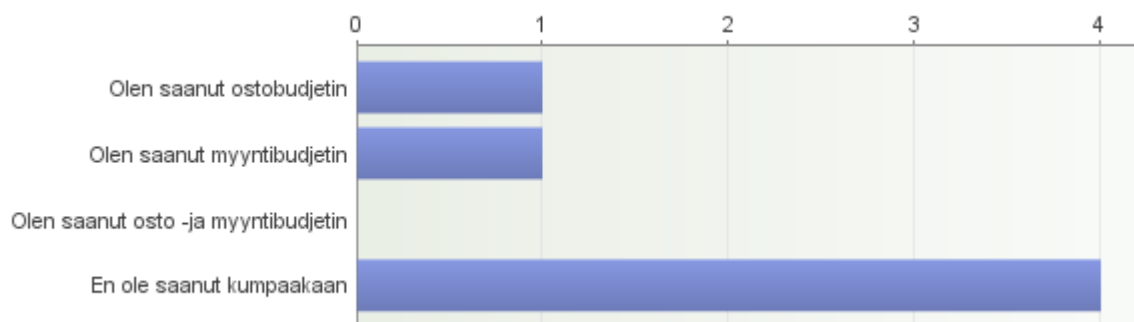
7. Minulla on mielestäni ajantasainen tieto hankkimistani tuotteista ja niiden hintatasosta?

Vastaajien määrä: 6



8. Oletko saanut ostobudjetin ja/tai myyntibudjetin?

Vastaajien määrä: 6



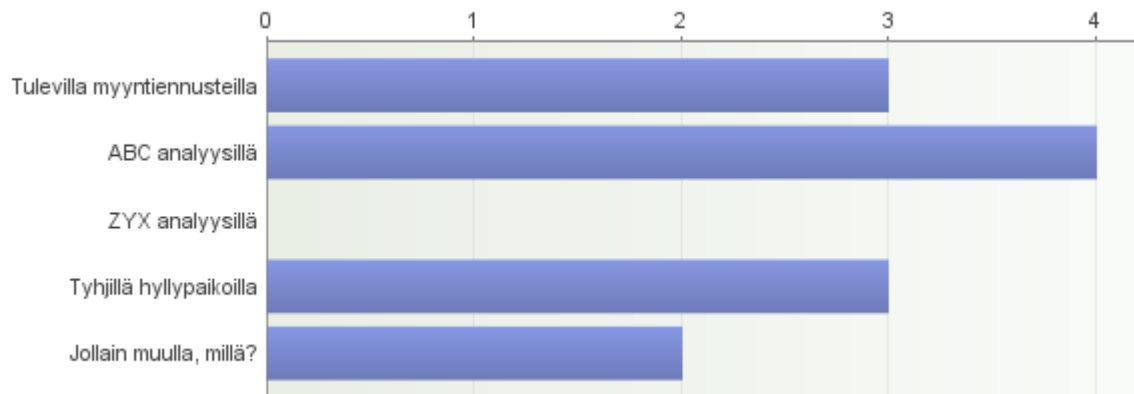
9. Tiedätkö kuinka saat seuraavat tiedot tukemaan hankintaa?

Vastaajien määrä: 6

	Tiedän	En tiedä	Yhteensä	Keskiarvo
Myyntihistorian edellisiltä kausilta?	5	1	6	1,17
Tulevat myyntiennusteet?	3	3	6	1,5
Ajantasaiset ostohinnat?	6	0	6	1
Kuljetushinnaston?	6	0	6	1
Toimitusajan?	5	1	6	1,17
Kierrosnopeuden?	2	4	6	1,67
Kannattavuusluvun?	2	4	6	1,67
Yhteensä	29	13	42	1,31

10. Kuinka päätät mitä tuotteita tilaat? (voit valita useamman vaihtoehdon)

Vastaajien määrä: 6



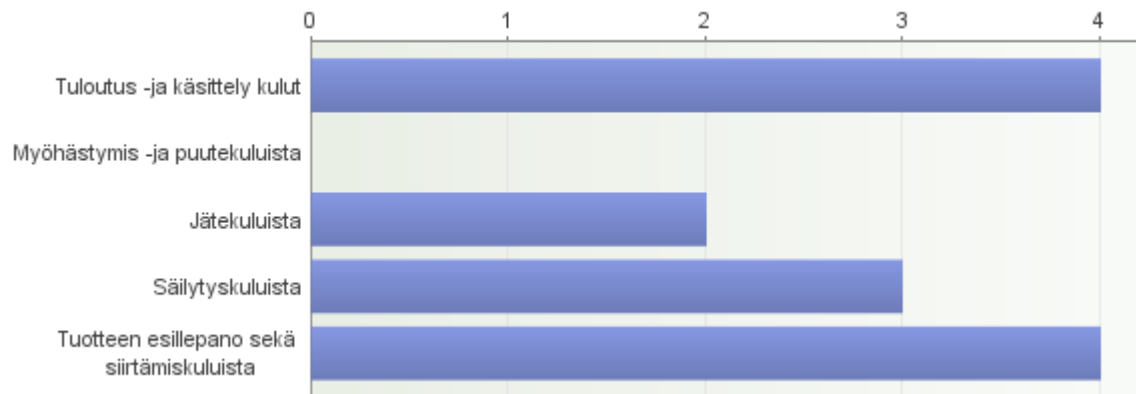
Avoimet vastaukset: Jollain muulla, millä?

- tarkkailemalla varastosaldoja
- tuotevalikoiman monipuolinen kattavuus suhteessa käytettäviin resursseihin.

Purchasing process at yard selling department, Case: Company X

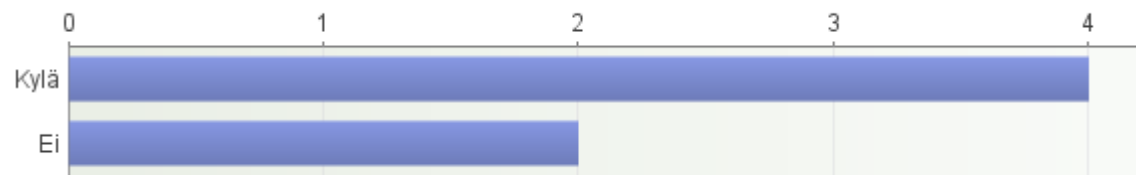
11. Oletko tietoinen tilaamiesi tuotteiden piilokuluista kuten? (voit valita useamman vaihtoehdon)

Vastaajien määrä: 6



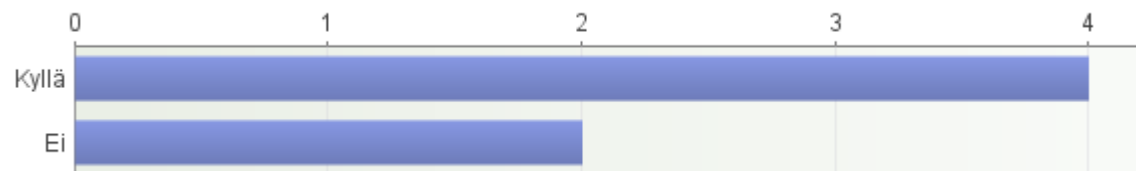
12. Oletko ollut mukana toimittajan sopimuksen teossa tai neuvotteluissa?

Vastaajien määrä: 6



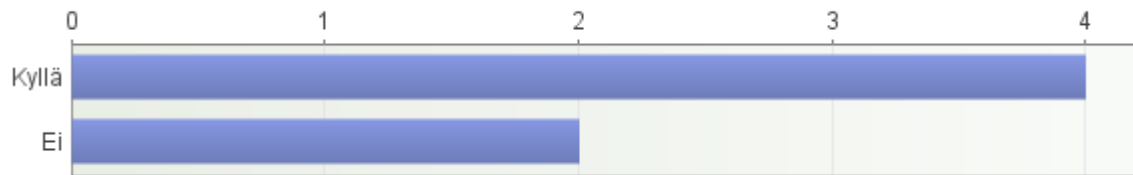
13. Oletko lukenut toimittajan kanssa tehtyä sopimusta tai osaa siitä?

Vastaajien määrä: 6



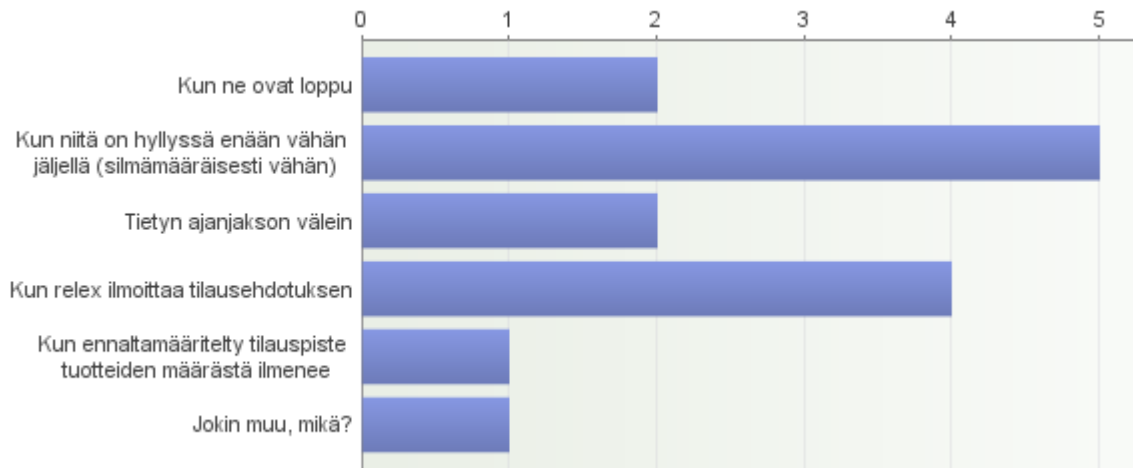
14. Kun teet hankintoja yritätkö vaikuttaa vielä hintoihin vaikka ne ovat ehkä jo ennalta määritetyt?

Vastaajien määrä: 6



15. Kuinka päätät koska tilaat tuotteita? (voit valita useamman vaihtoehdon)

Vastaajien määrä: 6

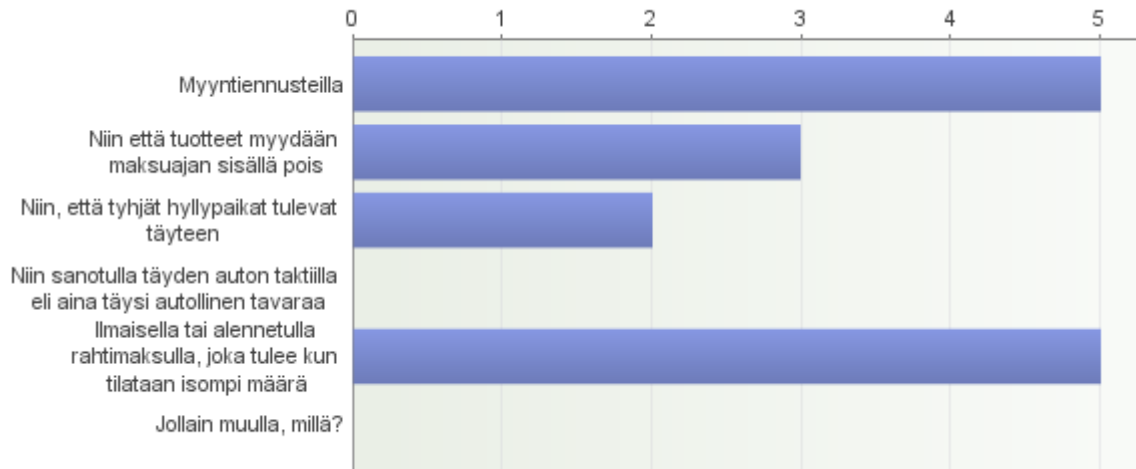


Avoimet vastaukset: Jokin muu, mikä?

- kun saldoilla on alle puolen kuukauden ennustettu menekki.

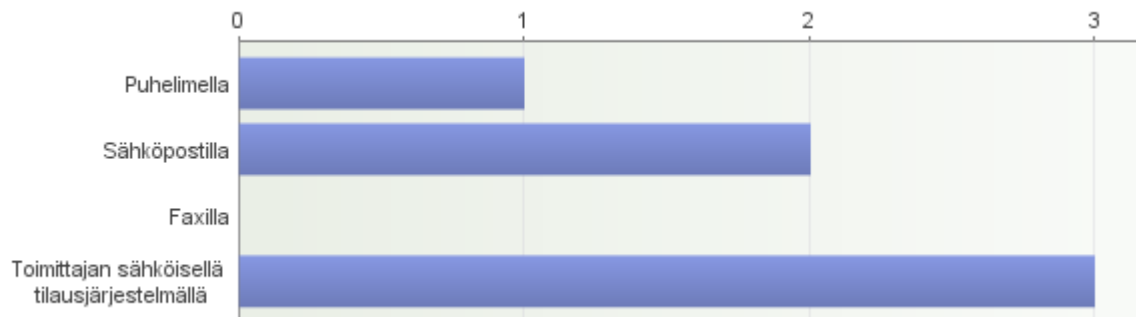
16. Kuinka päätät kuinka paljon tilaat tuotteita? (voit valita useamman vaihtoehdon)

Vastaajien määrä: 6



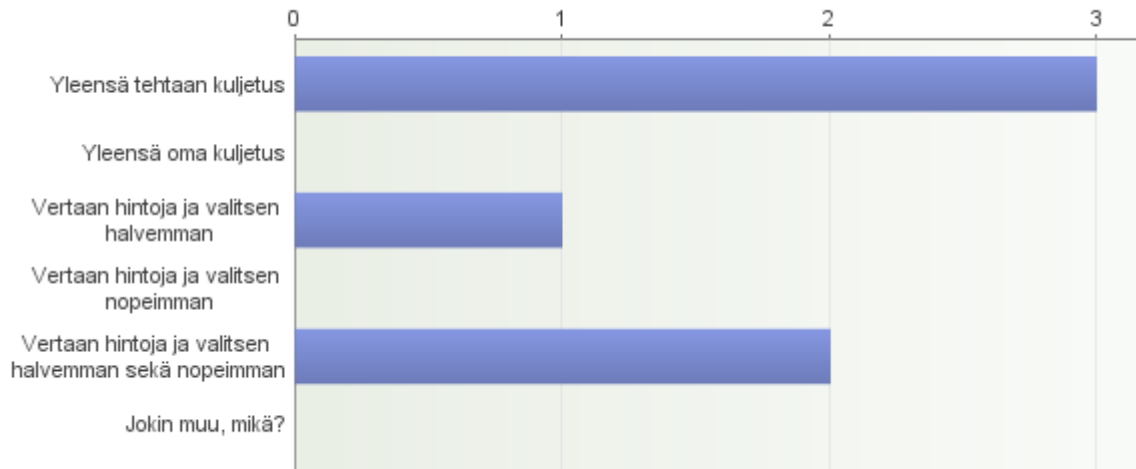
17. Kuinka toimitat yleensä tilauksen toimittajalle?

Vastaajien määrä: 6



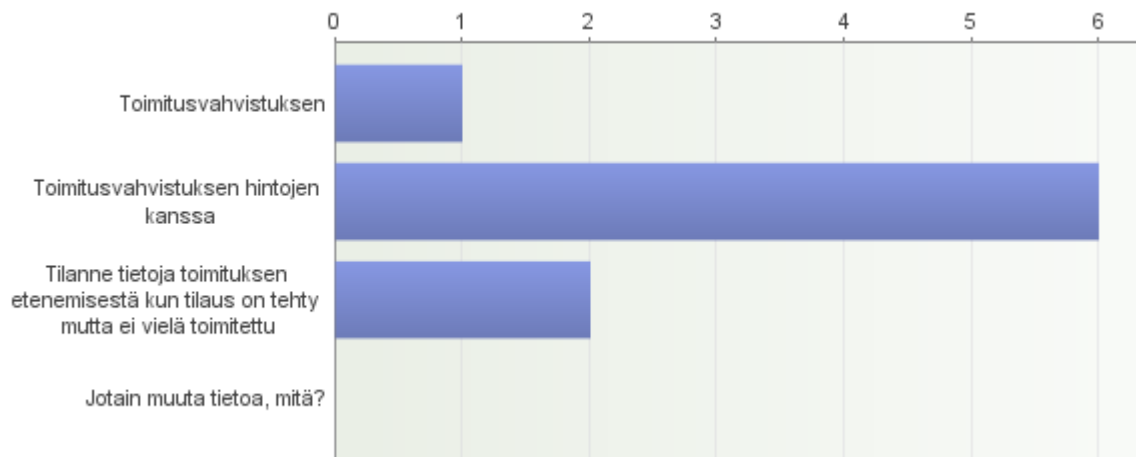
18. Kuinka valitset toimitustavan tilaamasi tuotteiden kuljetuksille

Vastaajien määrä: 6



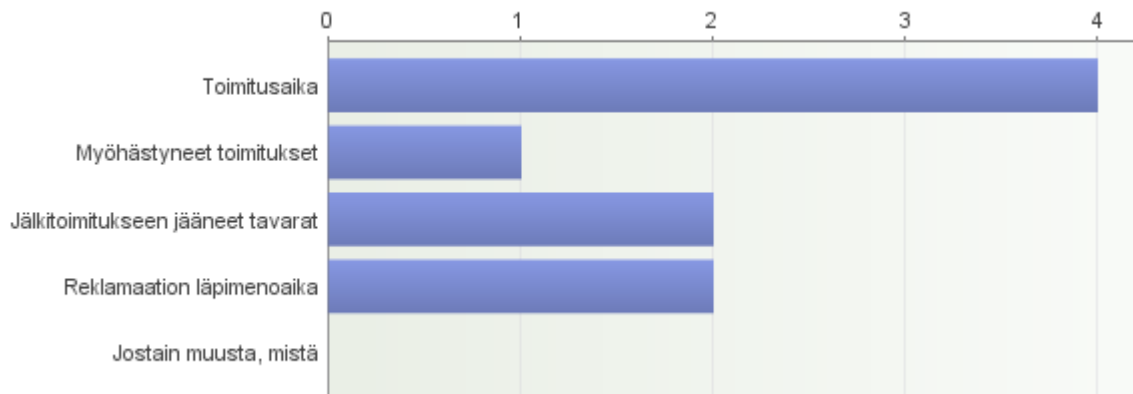
19. Pyydätkö toimittajalta seuraavia asioita tilauksen aikana? (voit valita useamman vaihtoehdon?)

Vastaajien määrä: 6



20. Pidätkö tilastoja seuraavista asioista koskien toimituksia? (voit valita useamman vaihtoehdon)

Vastaajien määrä: 6



21. Vapaa sana, voit kirjoittaa tähän mielipiteesi koskien nykyistä tilausprosessia tai siihen liittyviä asioita. Kirjoita myös jos sinulla on parannusehdotuksia tms.

Vastaajien määrä: 6

- Homma toimii.
- Selkeät tuotevastuut. Vastuuhenkilö ottaa huolehtii ettei muiden tarvitse myydä ei oota. Vastuullisuus ostamisessa! Oikeat tuotteet oikeaan sesonkiin ja tietenkin määrät myynnin mukaan.
- selkeät hinnastot ja rahtilaskuri
- Paljon on opittavaa...
- s
- tilaus järjestelmämme on koko ajan parantunut.